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Schaeffer, Merlin

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# **Social Mobility and Perceived Discrimination: Adding an Intergenerational Perspective\***

Merlin Schaeffer

University of Copenhagen  
Department of Sociology  
Centre for Health and Society  
Øster Farimagsgade 5, Building 16  
DK-1353 København K

mesc@soc.ku.dk

## *Abstract*

This article adds an intergenerational perspective to the study of perceived ethnic discrimination. It proposes the conjecture that perceived discrimination tends to increase with parental education, particularly among those children of immigrants who have attained only mediocre levels of education themselves. I discuss that this conjecture may be developed as an argument that comes in two versions: a narrow version about explicit downward (intergenerational) mobility and a wide version about unfulfilled mobility aspirations more generally. Analyses based on the six-country comparative EURISLAM survey support the argument: parental education positively predicts perceived discrimination in general, but among the less educated this relation is most pronounced whereas it is absent among those with tertiary education. A replication and falsification test based on the German IAB-SOEP Migration Sample reconfirms the main finding and provides further original pieces of evidence. The analyses suggest processes associated with unfulfilled mobility aspirations as the more plausible underlying reason.

**Keywords:** Discrimination, Immigration, Integration Paradox, Status Aspirations, Immigrant Optimism

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## Introduction

Ethnic inequalities remain stark across classical (European) immigration countries, but altogether they have declined over the last decades in legal (Koopmans, Michalowski, and Waibel 2012), political-representative (Bloemraad and Schönwälder 2013), and socio-economic (Li and Heath 2016) terms. Scholars who expect declining grievances about ethnic penalties as a result of these improved conditions, might be surprised by current research on the ‘integration paradox’ (Buijs, Demant, and Hamdy 2006; Verkuyten 2016). Under this concept, evidence has amounted according to which perceived discrimination is stronger, the better integrated persons of immigrant origin are. But of course, not all drivers of perceived discrimination are counterintuitive. For instance, members of minority groups that are most despised by the majority also report having made experiences of discrimination the most. The reason for the parallel existence of intuitive and counterintuitive findings is that perceptions of ethnic discrimination are a peculiar product of social exposure to actual discrimination and cognitive susceptibility to frame experiences in terms of discrimination. They are nevertheless consequential as stressors which erode mental and physical health or undermine academic test and work performance. All this renders the explanation of perceived ethnic discrimination a relevant sociological endeavor.

This article attempts to complement established scholarship by adding an intergenerational perspective, according to which social mobility matters to account for perceptions of ethnic discrimination among the children of immigrants. In particular, I propose the conjecture that perceived ethnic discrimination tends to increase with parental education, especially among those children of immigrants who have attained only mediocre levels of education themselves. I discuss that this conjecture may be developed as an argument that comes in two versions: a narrow version about explicit downward (intergenerational) mobility and a wide version about unfulfilled mobility aspirations more generally.

The empirical analyses are primarily based on the six-country comparative EURISLAM survey and confirm the general conjecture of this article. The results speak specifically in favor of the wide version of the social mobility argument,

according to which unfulfilled mobility aspirations are a driver of perceived discrimination. A robustness replication based on the IAB-SOEP Migration Sample reconfirms the main finding and provides several further pieces of evidence.

### **Theoretical Background**

Perceptions of ethnic discrimination are a menace to persons of immigrant origin, irrespective of the actual discrimination they face. As a stressor, perceived discrimination diminishes well-being (Safi 2010) along with both mental and physical health (Nandi, Luthra, and Benzeval 2016; Pascoe and Smart Richman 2009). It undermines self-confidence and thereby causes underperformance in school and at the workplace (Spencer, Logel, and Davies 2016). Verwiebe et al. (2016) unearth fear of discrimination as motivation among graduates of immigrant origin to apply for mismatching jobs. For similar reasons, immigrant minorities do not fully exploit opportunities to socialize with natives (Hewstone et al. 2015). Questioning the social significance of perceived discrimination as simply being an invalid indicator of actual discrimination overlooks these insights.

The study of how perceptions of ethnic discrimination emerge is an interesting and relevant sociological endeavor, exactly because they are highly consequential but not simply a reflection of actual discrimination (Quillian 2006). They are a combination of social exposure to actual discrimination and cognitive susceptibility to frame experiences in terms of discrimination (Doorn, Scheepers, and Dagevos 2013; Maxwell 2015). This explains intuitive findings, for instance, that persons of those origins who tend to be most rejected by natives report higher average levels of perceived discrimination (Habtegiorgis, Paradies, and Dunn 2014; Simonsen 2016). Another example is that immigrants who experience status loss (as compared to their country of origin) tend to suffer from depression over-frequently (Euteneuer and Schäfer 2018; Nicklett and Burgard 2009) and report more experiences of discrimination (Doorn et al. 2013; Steinmann 2018).

Social exposure and cognitive susceptibility also account for counterintuitive findings, which currently accumulate under the concept ‘integration paradox’ (Buijs et al. 2006; Verkuyten 2016). Perceptions of discrimination among persons of immigrant origin tend to increase with their educational level (Silberman, Alba, and Fournier 2007; Sizemore and Milner 2004; ten Teije, Coenders, and Verkuyten 2013; Steinmann 2018; de Vroome, Martinovic, and Verkuyten 2014; but see

Tolsma, Lubbers, and Gijsberts 2012); Diehl and Liebau (2017) even present longitudinal evidence. They are on average higher among the domestically as compared to the foreign born (Jasinskaja-Lahti, Liebkind, and Perhoniemi 2006; Litchmore and Safdar 2015; Skrobanek 2009; Yazdiha 2018), and among the employed as compared to the unemployed (Alanya, Baysu, and Swyngedouw 2015; André and Dronkers 2017). As Portes et al. (1980) argue, increasing integration among persons of immigrant origin goes along with a growing awareness about their marginalized (especially racial (Flores 2015)) status in society. This seems to come about by growing social exposure to natives at school, work, in associations and in their neighborhood (Rollock et al. 2011; Doorn et al. 2013; Steinmann 2018), as well as by increased local news media consumption that raises exposure to negative portrayals of ethnic minorities (Holtz, Dahinden, and Wagner 2013; Steinmann 2018). At the same time, investments into better integration may also increase immigrant minorities' cognitive susceptibility to frame experiences in terms of discrimination, as the 'hypothesis of rising expectations' explains (Cooney 2009; Silberman et al. 2007). Rejections from a mainstream are particularly difficult to endure, if persons of immigrant origin aspire to be a regular part of it (Runfors 2016). But even without increased expectations, Portes et al. (1980) theorize that integration in terms of acculturation, education and language skills enables minorities to cognitively comprehend actual experiences of discrimination as such.

Where perceptions of discrimination stem from failure and lack of success (e.g., at school or work), they are again a peculiar product of both social exposure and cognitive susceptibility. On the one hand correspondence studies testify that actual discrimination is a major cause of non-success among persons of immigrant origin (for recent meta-analyses see Auspurg, Schneck, and Hinz 2018; Zschirnt and Ruedin 2016). Yet, lack of success might also increase one's cognitive susceptibility to frame experiences in terms of discrimination. As an ex-post rationalization of failure such framing helps to retain a sense of agency and self-esteem, as the idea of the 'self-protective properties of stigma' proposes (Crocker and Major 1989). Note that this cognitive susceptibility increasing mechanism differs from the above-discussed ones, in that it focuses on the self-esteem incentives to frame experiences in terms of discrimination among the unsuccessful,

rather than on the cognitive capacities and rising expectations among the successful.

### *Social Mobility and Perceived Discrimination*

This article sets out to investigate another implication of the idea that perceptions of ethnic discrimination are a peculiar product of social exposure and cognitive susceptibility: I propose the conjecture that perceived discrimination tends to increase with parental education, particularly among those children of immigrants who have attained only mediocre levels of education themselves. Those who attain mediocre education despite a favorable educational background are more likely to have been exposed to actual discrimination (and hence failed), and they have cause to frame their experiences in terms of discrimination as an ex-post rationalization of their lack of success. In the following, I further elaborate the argument why a lack of social mobility matters for perceived discrimination. I distinguish a narrow and a wide version of the argument, although I will ultimately only be able to provide a thorough test of the general implications of the argument that are compatible with both versions.

One can argue that the proposed conjecture narrowly captures a consequence of *explicit downward (intergenerational) mobility*. That is, perceived discrimination derives from a loss of (educational) standing from one generation to the next. Indeed, the ‘motive of status maintenance’ (Breen and Goldthorpe 1997; Stocké 2007) proclaims that people seek to reproduce their parents’ social status and regard it as a major failure in life if they are not able to do so. This implies that being at par with one’s parents is the cardinal demarcation that distinguishes success from failure. This narrow version of the social mobility argument is closely-related to the literature on the consequences of downward international (in contrast to intergenerational) mobility; immigrants who experience status loss due to their international immigration tend to suffer from depression over-frequently (Euteneuer and Schäfer 2018; Nicklett and Burgard 2009) and report more experiences of discrimination (Doorn et al. 2013; Steinmann 2018).

However, there is good reason to widen the social mobility argument and consider that the conjecture may be driven by *unfulfilled mobility aspirations* more generally. The wider version acknowledges that people might aspire to surpass their parents’ level of education, so that failure even lurks in attaining (mediocre)

levels of education that lie above the level of education of one's parents. In contrast to the narrow version of the argument, the wide version proposes no fixed demarcation at which failure turns into success, apart from suggesting that those who reached the highest levels of education, by definition, succeeded in attaining their social mobility aspiration. This wider version might particularly apply to persons of immigrant origin. According to so-called 'immigrant optimism' or 'immigrant paradox' research, the children of immigrants over-frequently aspire to surpass their parents' level of education (Ichou 2014; Luthra and Soehl 2015; Salikutluk 2016). It might be in this aspiration to surpass their parents that they fail and which then turns into perceived discrimination—an unanticipated downside of immigrant optimism.

To establish the intergenerational perspective according to which lacking social mobility matters for perceived discrimination, this article lays its main focus on hypotheses that are compatible with both versions of the argument. Initially, the social mobility argument may be used to motivate the overall expectation that *on average persons of immigrant origin with better-educated parents report experiences of discrimination more frequently (H1)*. The reason is that according to both versions of the argument, parental education serves as a central reference point and therefore indicates mobility aspirations. Indeed, research on persons of immigrant origin's status aspirations shows how these strongly increase with parental education (Teney, Devleeshouwer, and Hanquinet 2013; albeit less so than among natives: Relikowski, Yilmaz, and Blossfeld 2012; Salikutluk 2016).<sup>1</sup> Higher parental education thus raises the bar and thereby increases the probability of making experiences of failure, which may be framed in terms of discrimination. Yet, the social mobility argument also qualifies that Hypothesis 1 conceals important heterogeneity in the strength of the association between parental education and perceived discrimination that is driven by respondent's own level of education. That is, because the intergenerational perspective shifts the focus to deficient social mobility, it implies that *higher levels of own education mitigate the degree to which parental education predicts perceptions of discrimination (H2)*.

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<sup>1</sup> This may be taken as indication in favor of the wide unfulfilled mobility aspirations version of the argument, because the smaller correlation stems from the fact that immigrant kids over-frequently try to surpass their parents' level of education (see previous paragraph).

The theoretical development and empirical test of Hypothesis 1 and Hypothesis 2 are the main aim of this article. Answering the subsequent question whether they are driven by explicit downward mobility or more general unfulfilled mobility aspirations is largely beyond the article's capacity. Nevertheless, the following sub-hypothesis attempts to provide a first step into that direction. The narrow version's emphasis of explicit downward mobility suggests that the difference between parental and own education ( $\Delta_{\text{Edu}} = \text{Edu}_{\text{Parents}} - \text{Edu}_{\text{Self}}$ ) is the most direct measure of the driving mechanism and thus a better predictor of perceived discrimination than the interaction implied in Hypothesis 2. But what specifically defines the narrow version is its claim according to which being at par with one's parents is the demarcation that distinguishes success from failure. It follows that *only explicit downward mobility in terms of positive differences  $\Delta_{\text{Edu}}$  (increasingly less education than one's parents) predicts perceived discrimination (H2a)*. It is difficult to formulate an accompanying sub-hypothesis for the wide version of the social mobility argument, because it simply makes less explicit and hence testable assumptions. I will instead emphasize findings throughout the results section that are compatible with the wide version but less so with the narrow one.

## **Data and Methods**

The primary analyses of this study are based on the publicly-available EURISLAM data that were collected through computer assisted telephone interviews in Belgium, France, Germany, the Netherlands, Switzerland, and the UK in 2011 (Hoksbergen and Tillie 2012). The survey consists of more than 7,000 interviews with natives, as well as oversamples of persons of ex-Yugoslav, Turkish, Moroccan, and Pakistani origin, which constitute the most important Muslim-origin countries in the six destination countries entailed in the survey. Respondents of immigrant origin were sampled from the latest available electronic phone-books via an onomastic procedure. At the beginning of the questionnaire, all respondents were screened as being of immigrant origin if they themselves or at least one of their parents was of Muslim and the required ethnic background. The EURISLAM survey allowed for bilingual interviews, so that respondents could choose between the language of the country of residence or their country of origin.



Like most contemporary telephone surveys (particularly among minority populations) EURISLAM has low response rates, with “47,8% for the ex-Yugoslav group, 41,2% for the Moroccan origin group, 30,5% for the Pakistani origin group and 55,7% for the Turkish origin group” (Hoksbergen and Tillie 2012 p. 12). Differentiated by country, the lowest response rate is 20.3% among the target population of Moroccan origin in France. These response rates are adjusted for “unknown eligibility”, that is, to incorrect telephone numbers, screen out, but also to non-contact. The latter of the three unknown eligibility reasons is problematic, because it means that response rates are probably even lower. Moreover, EURISLAM does not provide any weights. The analyses presented below may therefore provide compelling tests of the raised hypotheses, but should not be considered as representative of the populations studied.

Persons originating from ex-Yugoslavia, Turkey, Morocco, and Pakistan are on average phenotypically distinguishable from central Europeans and tend to hold distinctively ethnic names. Moreover, their religion, Islam (97% of the sample identify as Muslim), ‘has become the key site for demarcating boundaries between majority populations and individuals of immigrant origin across Europe’ (Statham and Tillie 2016). In consequence, this analysis focuses on persons of immigrant origin who can plausibly claim to have experienced failure due to discrimination.

Analyzing EURISLAM also means that respondents originate from countries where the majority of the population holds rather conservative gender-role attitudes (Carol 2016). This could indicate gender-specific social mobility aspirations among immigrant parents and their children. Fleischmann and Kristen (2014) discuss, for instance, how reservations against female labor market participation among immigrant parents could affect the educational attainment of girls. Against this background, one could wonder about gender differences with regards to the hypotheses. Online Supplement A discusses and empirically tests this possibility in detail but finds no evidence of any gender differences.

Among the EURISLAM respondents, this paper focuses on children of immigrants who have attended school in their country of residence. This sample definition is important since the argument about perceived ethnic discrimination does not apply to those who have only attended schools abroad, which a falsification test supports (see online Supplement G). Moreover, I exclude all respondents

who are currently enrolled in education, because their educational attainment vis-à-vis their parents' is not yet established. Additional results show that the conclusions of this study are robust to further excluding respondents who are younger than 25 (see online Supplement K). Overall this results in an analysis sample of  $n = 2,478$  respondents, 1,135 of which are 1.5<sup>th</sup> (i.e., born abroad but hold a general or vocational degree from the country of residence) and 1,343 of which are second (i.e., born domestically or immigrated before the age of six, and have at least one parent who was born abroad) generation persons of immigrant origin. Note that this sample definition does not restrict age and hence includes respondents for whom (discriminatory) experiences at school are long past. Online Supplement A therefore tests whether the results are affected by age or time since schooling, but finds no indication of that.

#### *Perceived Discrimination*

The dependent variable of this analysis is perceived discrimination, for which the EURISLAM survey entails a simple yes/no question:

*Have you ever experienced hostility or unfair treatment towards you by people of [country of residence (CR)] origin?*

This binary variable closely mirrors how perceived personal discrimination is generally measured in surveys. Its generic nature is insofar unfortunate, as the proposed conjecture (i.e., mediocre educational attainment despite favorable parental background) particularly pertains to discrimination experienced at school. Moreover, it potentially also captures other forms of discrimination, such as age or gender discrimination, due to its generic nature. The IAB-SOEP robustness and falsification test reported later overcomes both limitations.

The EURISLAM survey also considered two items about perceived group discrimination. But these questions were only asked in four of the six countries. Moreover, in terms of survey methodology, the questions on group discrimination are more generic and vaguer than the question on perceived personal discrimination. Respondents are asked what they think others who are alike experience; it is guesswork rather than recollection of a significant personal experience. It therefore comes at little surprise that additional analyses show that many of the estimated associations are weaker or even insignificant for perceived group as

compared to personal discrimination (see online Supplement B). For these reasons, this study focuses on perceived personal discrimination as dependent variable.

### *Predictor and Moderator Variables*

The EURISLAM data entail generated variables for maternal and paternal education, which differentiate the four categories ‘no degree’, ‘primary education’, ‘secondary education’, and ‘tertiary education’. As parental education, I use the educational status of the better-educated parent. Unfortunately, the EURISLAM survey entails no direct measures of aspirations that would allow delving deeper into the proposed mechanisms. To at least partially validate parental education as an indicator of mobility aspirations in a robustness test (see below), I use a variable that captures respondents’ ambition to make their parents proud.<sup>2</sup> I measure respondents’ own education on the detailed ISCED 97 scale. The results are robust to using the ISCED 97 without distinguishing sub-levels (see online Supplement L).

The fact that respondents’ own and their parental education are measured differently by EURISLAM has important implications for the operationalization of Hypothesis 2 (the interaction effect) and Hypothesis 2a ( $\Delta_{\text{Edu}} = \text{Edu}_{\text{Parents}} - \text{Edu}_{\text{Self}}$ ). I deal with this challenge in the following three ways. First, for the linear test of Hypothesis 2 I use respondents’ own and parental education as z-standardized continuous predictors, so that both are coded in terms of standard deviations. Second, for the additional categorical test of Hypothesis 2 I generate strongly coarsened versions of both variables, which simply distinguish between low, medium and high education. The categorical operationalization combines no degree and primary education as low education, codes secondary education as medium, and tertiary education as high education. Finally, to test sub-Hypothesis 2a, I first recode respondents’ own education to match the categories of parental education: ‘no degree’ (ISCED level 0), ‘primary education’ (ISCED level 1), ‘secondary education’ (ISCED 2-4), and ‘tertiary education’ (ISCED 5-6). I then subtract respondents’ own from their parental education ( $\Delta_{\text{Edu}} = \text{Edu}_{\text{Parents}} - \text{Edu}_{\text{Self}}$ ).

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<sup>2</sup> ‘One of the most important goals in life is to make one’s parents proud’: ‘Strongly disagree’, ‘Disagree’, ‘Agree’, and ‘Strongly agree’.

Because Hypothesis 2a explicitly focuses on positive values of this predictor, I test whether there is a regression spline (i.e., a difference in the slope) once  $\Delta_{\text{Edu}}$  turns from negative to positive. As an alternative, I build a categorical measure that simply distinguishes the down- and upwardly mobile from those who reproduced their parental education. This categorical measure can be understood as a truncated version of the continuous spline specification.

Table 1 shows descriptive sample statistics for perceived discrimination by the strongly coarsened categorical versions of respondents' own and parental education (Table H.5 shows similar results for the IAB-SOEP). The bottom off-diagonal cells contain those who are less educated than their parents (i.e., downwardly mobile). Together they make about 22% of the sample.<sup>3</sup> Table 1 conveys patterns that foreshadow the results of the multivariate analyses reported below. In line with Hypothesis 2, we see that among low educated respondents, reports of experienced discrimination are more frequent for those with intermediate and even much more frequent for those with highly educated parents as compared to those with less educated parents. The same pattern is not visible among respondents who attained an intermediate or high level of education.

Yet, Hypothesis 2a, which follows the narrow (explicit downward mobility) version of the intergenerational mobility argument, proposes a direct comparison of perceived discrimination among those in the bottom off-diagonal cells to those in the diagonal (i.e., similarly educated as their parents, together ca. 38%) and upper off-diagonal cells (i.e., upwardly mobile, together ca. 40%). At least descriptively there is no clear support for this idea. Theoretically this simple comparison may be flawed, however, if the integration paradox and the intergenerational mobility argument counteract each other in this table. That is, the better educated have been shown to report experiences of discrimination more frequently and the upwardly mobile are, on average, better educated than the downwardly mobile. Vice versa, we might not see increased levels of perceived discrimination among the better educated in the marginal distribution of respondents' own education (bottom row), because of the downwardly mobile among the less educated.

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<sup>3</sup> Note that Table H.1 in online Supplement H reports somewhat different percentages of downwardly (18.75%), upwardly (52.49%), and non-mobile (28.76%) respondents. The reason is that Table H.1 reports percentages for the coarsened indicator version of  $\Delta_{\text{Edu}}$ , which is based on parental and respondents' education variables that distinguishes between ISCED levels 0 and 1. In Table 1, these two ISCED levels are both contained in the "Low" category.

These claims therefore need to be tested in multivariate models that further take important country, origin and other group differences into account. I thus turn to the remaining aspects of the methodological design now.

Table 1: Descriptive Sample Statistics on Social Mobility and Perceived Discrimination

Parental education	Respondents' own education			Total
	Low	Medium	High	
Low				
N	408	637	205	1,250 (50.4%)
Outflow (row)	32.6%	51.0%	16.4%	
Inflow (column)	61.6%	48.3%	41.3%	
Cell	16.5%	25.7%	8.3%	
Perc. discrimination	33.2%	39.7%	41.6%	37.2%
Medium				
N	166	382	144	692 (27.9%)
Outflow (row)	24.0%	55.2%	20.8%	
Inflow (column)	25.1%	28.9%	29.0%	
Cell	6.7%	15.4%	5.8%	
Perc. discrimination	38.9%	41.9%	38.7%	40.1%
High				
N	88	301	147	536 (21.6%)
Outflow (row)	16.4%	56.1%	27.4%	
Inflow (column)	13.3%	22.8%	29.6%	
Cell	3.6%	12.1%	5.9%	
Perc. discrimination	45.9%	37.9%	32.7%	39.0%
Total				
N	662	1,320	496	2,478
%	26.7%	53.3%	20.0%	100.0%
Perc. discrimination	35.1%	39.6%	39.6%	38.4%

*Note: Results are based on multiply imputed data, case numbers are rounded.*

*Source: EURISLAM survey, author's own estimates.*

### Control Variables

The analyses adjust for a rich set of control variables. The base set of control variables are: gender, country of origin, and country of residence. Further control variables follow existing studies on the integration paradox: immigrant generation, age in years (as it is strongly predictive of immigrant generation), employment status, local media consumption<sup>4</sup>, language skills<sup>5</sup>, and the share of natives

<sup>4</sup> 'When you read newspapers or watch television, in which language is that?': 'Always in [language of CR]', 'Mostly in [language of CR]', 'About equally often in [language of CR] and my parents' mother tongue', 'Mostly my parents' mother tongue', and 'Always in my parents' mother tongue'.

<sup>5</sup> 'How often do you have problems with the [language of CR] language in a conversation?': 'Never', 'Rarely', 'Sometimes', 'Often', and 'Always'.

in the neighborhood<sup>6</sup>. Moreover, I go beyond existing studies and also include ‘unconcealed’ religiosity<sup>7</sup>. Apart from the base set, these controls may be regarded as bad controls, as they are intermediate outcomes of both parental education and own educational attainment. Nevertheless, all models reported in this article include these variables to test whether the proposed conjecture identifies a systematic pattern beyond findings known from the established literature. Additional analyses show that the results hold if they are only adjusted for the base set of controls (see online Supplement C). Online Supplement H shows descriptive sample statistics for all variables used in the analyses.

### *Methods*

I use logistic regression to regress perceived discrimination on respondents’ own education, parental education, their interaction, and two alternative measures of their difference ( $\Delta_{\text{Edu}}$ ). Because  $\Delta_{\text{Edu}}$  is a linear function of respondents’ own and parental education, considering all three variables in a common regression model leads to collinearity problems. Yet, it is important to adjust for respondents’ own and parental education, because the downwardly mobile are, on average, less educated and have parents who hold at least a primary school degree. Since the integration paradox has shown over and over again how education is associated with higher levels of perceived discrimination and since Hypothesis 1 states the same for parental education, these effects could bias any estimate of the  $\Delta_{\text{Edu}}$  effect. I therefore use logistic diagonal reference models (Sobel 1981, 1985) to control for the categorical versions of parental and respondents’ own education. Online Supplement I reports results of common logistic regression models that do not control for respondents’ own and parental education; the results are similar in conclusion.

All continuous variables are z-standardized. Additional analyses show that the results of the logistic regression models hold if estimated as linear probability models with robust standard errors (see online Supplement D). To account for missing values (with 4.4% parental education is the variable with most missing values, followed by 3.0% missing values for unconcealed religiosity), I estimate

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<sup>6</sup> ‘How many people in your neighborhood are of [CR] origin?’: ‘(Nearly) all’, ‘The majority’, ‘Approximately the half’, ‘A minority’, ‘(Almost) none’.

<sup>7</sup> A simple additive index (0-3) that captures whether respondents abstain from drinking alcohol, follow dietary rules, and refrain from certain activities during religious holidays.

models with 25 imputations from chained equations for the missing values on any of the variables. As suggested by Enders (2010), the imputation models consist of all variables of the later analyses, including the interaction terms discussed below.

## Results

The established literature states that better-integrated persons of immigrant origin feel more discriminated than the less integrated. As a first step, I therefore discuss in how far the current analysis of the six-country comparative EURISLAM survey corroborates core findings of that literature (but see the IAB-SOEP robustness test below). Indeed, Model 1 of Table 2 shows that perceived discrimination significantly increases with respondents' level of education. Another indicator are differences in perceived discrimination of second generation as compared to 1.5th generation persons of immigrant origin. Second generation persons of immigrant origin, who spent their whole life in the country of residence, are arguably on average better integrated. As Model 1 of Table 2 shows, they also report to have experienced discrimination more frequently.

The integration paradox literature further suggests that media consumption and language skills partly drive these results because they enable persons of immigrant origin to comprehend the extent of negative portrayals against them. A second line of reasoning found in this literature considers exposure to natives at work, in the neighborhood and so on as a driver of increased perceptions of discrimination among the better integrated. But based on the EURISLAM data I find no evidence for these claims; only the neighborhood share of natives is associated with increased reports of discrimination (Model 1 of Table 2). A mediation analysis confirms that education and second-generation status are not indirectly associated with perceived discrimination via these variables (see online Supplement J). Note however, that earlier studies also report rather mixed evidence for these predictors, in part because they also entail positive contact experiences (Doorn et al. 2013; ten Teije et al. 2013). Neither do those who are openly (i.e., unconcealed) religious by abstaining from drinking alcohol, following dietary rules, and refraining from certain activities during religious holidays report experiences of discrimination more frequently.

Table 2: Perceived Discrimination Regressed on Established Integration Paradox Determinants and Parental Education

	Model 1		Model 2		Model 3	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
(Intercept)	-0.372*	-2.216	-0.428*	-2.529	-0.436*	-2.570
Respondents' education	0.198***	3.609	0.175**	3.146	0.172**	3.090
2. Generation	0.323**	3.133	0.326**	3.159	0.332**	3.215
Employed	-0.023	-0.226	-0.031	-0.301	-0.029	-0.285
Media consumption	0.076	1.255	0.079	1.304	0.073	1.195
Language skills	-0.017	-0.252	-0.026	-0.390	-0.028	-0.412
Native neighborhood share	0.095*	2.097	0.092*	2.011	0.091*	1.988
Unconcealed religiosity	0.080	1.617	0.087+	1.741	0.093+	1.849
Country of residence (reference: Germany)						
Belgium	-0.024	-0.162	-0.018	-0.122	-0.006	-0.041
Switzerland	-0.007	-0.047	-0.025	-0.159	-0.028	-0.177
France	-0.678***	-4.439	-0.624***	-4.050	-0.594***	-3.794
UK	-1.417***	-9.271	-1.443***	-9.402	-1.443***	-9.340
Netherlands	-0.392**	-2.837	-0.391**	-2.825	-0.400**	-2.887
Country of origin (reference: Pakistan)						
Ex-Yugoslavia	-0.044	-0.266	-0.002	-0.010	0.006	0.037
Turkey	0.295*	2.100	0.390**	2.698	0.382**	2.615
Morocco	0.386**	2.704	0.495***	3.340	0.508***	3.408
Female	-0.311***	-3.407	-0.312***	-3.407	-0.309***	-3.385
Age (in years)	-0.118+	-1.928	-0.094	-1.525	-0.095	-1.546
Parental education			0.142**	2.760	0.144**	2.773
Make parents proud					-0.041	-0.903
*parental education					0.081+	1.728
McFadden's Pseudo-R <sup>2</sup>	0.066		0.069		0.070	

Note: Logistic regression results; n = 2,478; +  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Source: EURISLAM survey, author's own estimates.

Turning to the intergenerational conjecture proposed in this study and the question whether it identifies a systematic pattern beyond what has already been established in the literature, Model 2 of Table 2 adds parental education to the model. In line with Hypothesis 1, respondents with better-educated parents report to have experienced discrimination significantly more often. In fact, parental education is nearly as strong a predictor of perceived discrimination as respondents' own education (all continuous variables are z-standardized), which the linear probability models corroborate (see online Supplement D).

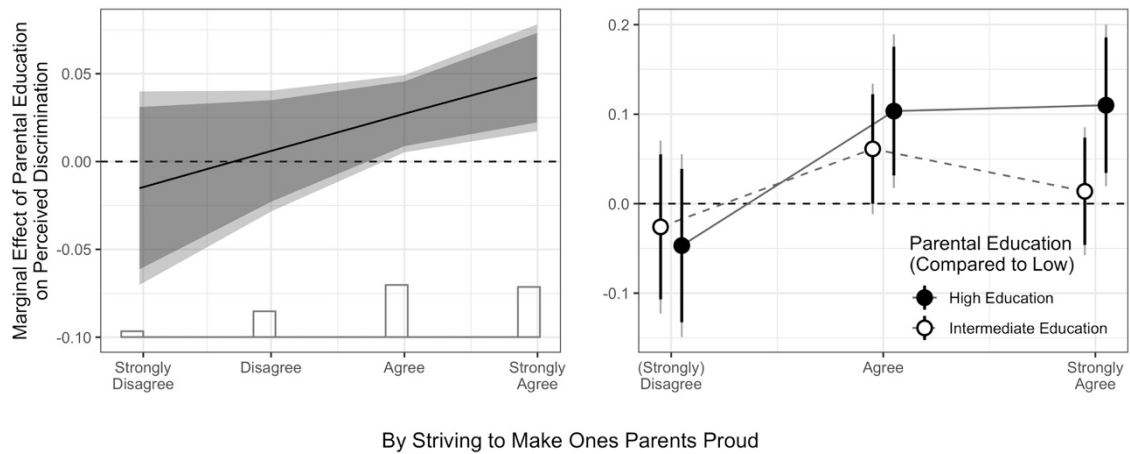
The reasoning underlying Hypothesis 1 is that for both the downward mobility and the unfulfilled mobility aspirations versions of the argument, parental education is a central reference point that sets the bar for personal mobility aspirations; it thereby increases the probability of making experiences of failure, which may be framed in terms of discrimination. Unfortunately, the EURISLAM data contain



no direct assessment of aspirations that would allow me to validate this assumption. To at least partly plausibilize it, I make use of a variable that captures respondents' desire to make their parents proud. If the assumption holds that parental education, on average, raises the bar and thereby increases the probability to perceive experiences of discrimination, it should hold specifically among those who strive to make their parents proud. Vice versa, for those who do not strive to make their parents proud, parental education is, on average, most likely not an important reference. In line with this idea, Model 3 of Table 2 shows a marginally significant ( $p = 0.0840$ , two-tailed) positive interaction between parental education and the desire to make one's parents proud.

The left-hand panel of Figure 1 visualizes the pattern implied in these regression coefficients. We see that the more respondents agree that making one's parents proud is an important life goal (x-axis), the stronger does the association between perceived discrimination and parental education (y-axis) become. Thus, parental education is indeed a positive predictor of perceived discrimination among those who regard making one's parents proud an important life goal, but not among those who disagree. The right-hand panel of Figure 1 shows that these results are not artificially driven by the linear specification of the predictors. Additional analyses based on the IAB-SOEP (see below) provide, by and large, a comparable result based on a correlate of the intention to make one's parents proud. Parental education is a positive predictor of perceived discrimination among those whose parents closely monitored their performance at school (see online Supplement F). Again, if the assumption that parental education serves as an important point of reference is valid, it should hold especially for those who have parents that stressed school performance. These robustness tests are certainly imperfect, but their results are nevertheless hard to square without recognizing a systematic link between parental education and mobility aspirations.

Figure 1: The Marginal Effect of Parental Education on Perceived Discrimination by Striving to Make One's Parents Proud



*Note:* Marginal effects and associated 90 and 95% confidence intervals. Bars indicate the histogram of the moderating variable. The linear results are based on Model 3 of Table 2. The categorical results are based on Model 1 of Table E.1 in online Supplement E.

*Source:* EURISLAM survey, author's own estimates.

Having thus established parental education as predictor of perceived discrimination, we may turn to Hypothesis 2: do higher levels of own education mitigate this relationship? This idea is investigated in Table 3. Model 1 introduces the respective interaction. As expected, it is sizable (in relation to its main effects as reported in Table 2) and significantly negative. Having already stated that the unconditional standardized coefficient of parental education is one of the largest standardized coefficients of the whole model (see particularly the first linear probability of Table D.1), it is notable that the interaction term implies that a standard deviation change in respondents' own education can either nearly diminish or double the importance of parental education in strength (Model 2 of Table D.1). This suggests that the intergenerational perspective is indeed an important complement to established predictors of perceived discrimination.

Table 3: Intergenerational Social Mobility and Perceived Discrimination

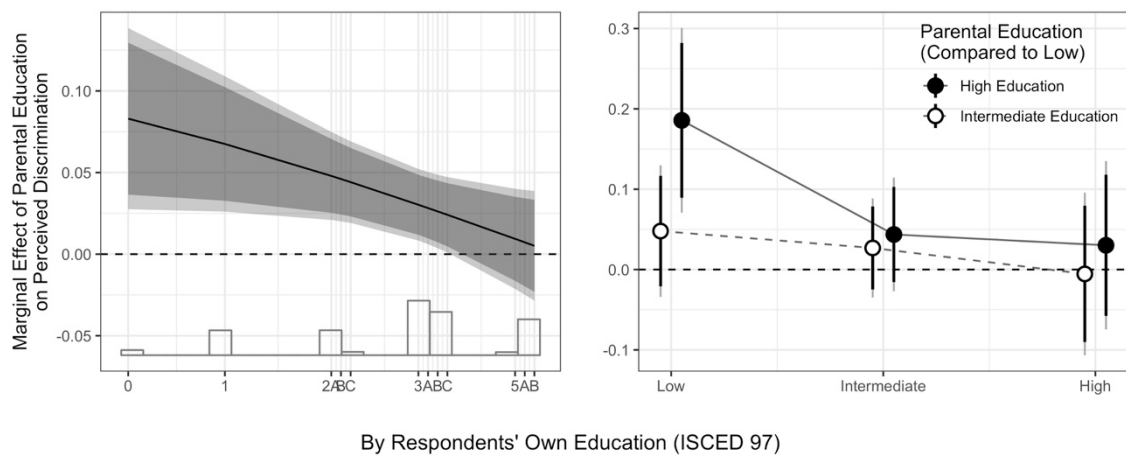
	Model 1		Model 2		Model 3		Model 4		Model 5	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
Respondents' education	0.160**	2.863							0.312**	2.801
Parental education	0.171**	3.217							-0.019	-0.129
*respondents' education	-0.109*	-2.098							-0.110*	-1.694
$\Delta_{\text{Edu}}$			-0.058	-0.828	-0.010	-0.063			0.202	0.920
Spline					0.031	0.172			0.044	0.247
* $\Delta_{\text{Edu}}$					-0.050	-0.273			0.074	0.349
Educational mobility										
Down							-0.143	-0.844		
Up							0.065	0.482		
Controls	✓		✓		✓		✓		✓	
$\omega$ : weight of parental education			0.455	6.964	0.464	6.194	0.446	5.740		
Diagonal education intercepts										
$\mu_{11}$ : low			0.070	0.394	0.057	0.273	0.012	0.055		
$\mu_{22}$ : medium			0.539	3.396	0.581	3.061	0.544	2.771		
$\mu_{33}$ : high			1.160	5.898	1.150	4.848	1.303	5.417		
McFadden's Pseudo- $R^2$	0.070		0.065		0.065		0.065		0.072	

*Note:* Model 1 and Model 5 are logistic regression models. Model 2 to Model 4 are logistic diagonal reference models. Results are controlled for: immigrant generation, employment status, media consumption, language skills, share of native residents in the neighborhood, unconcealed religiosity, country of residence and origin differences, gender, and age.  $n = 2,478$ ; \*  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

*Source:* EURISLAM survey, author's own estimates.

The left-hand panel of Figure 2 visualizes the pattern implied in these coefficients (after all, the three consecutive terms of an interaction are hard to puzzle out on their own, particularly the conditional main effects). It shows that the strength of the association between parental education and perceived discrimination (y-axis) is strongest among the least educated, for whom a standard deviation increase in parental education goes along with an 8.3% (ISCED level 0) to 6.8% (ISCED level 1) increase in the probability to report experiences of discrimination. This association declines as respondents' own education increases (x-axis). But it is only among those with tertiary education that parental education does not matter for perceived discrimination anymore. That is, only among those who reached the highest absolute levels of education does the marginal effect turn insignificant and close to zero. This finding somewhat speaks in favor of the wider version of the intergenerational mobility argument, because many respondents at lower levels of education have been de facto upwardly mobile. At each ISCED (sub-)level 2 or 3, between 38 and 72% of the respondents are better educated than their parents.

Figure 2: The Marginal Effect of Parental Education on Perceived Discrimination by Respondents' Own Education



*Note:* Marginal effects and associated 90 and 95% confidence intervals. Bars indicate the histogram of the moderating variable. The linear results are based on Model 1 of Table 3. The categorical results are based on Model 2 of Table E.1 in online Supplement E.

*Source:* EURISLAM survey, author's own estimates.

One might question whether these results are artificially driven by the linear specification of the model. The right-hand panel of Figure 2 shows that the conclusion also holds if parental and respondents' own education are coarsened to categorical variables: among the low (and in tendency also intermediately) educated, it is those with highly in contrast to less educated parents who feel particularly discriminated.

Another question of concern is whether these results conceal systematic differences between populations. With regard to gender, for instance, one could wonder, whether the reported moderation works similarly for men and women, given that parents might have gendered expectations about intergenerational social mobility (i.e., which level of education their children should achieve). Another important question is whether the results generalize across all of the six countries studied. Online supplement A discusses and tests overall ten plausible dimensions by which one could expect these results to differ. But neither the EURISLAM nor the IAB-SOEP (see below) analyses provide much evidence that this central result differs by gender, country of residence, immigrant generation, age or time since schooling, ethnic identification, religion, desire to make one's parents proud or parental monitoring.

A final point to consider is the additional sub-Hypothesis 2a derived from the narrow (strict downward mobility) version of the argument. The evidence presented so far is by and large in line with both versions, despite the fact maybe that we have noted parental education to remain a significant predictor of perceived discrimination among considerable shares of upwardly mobile respondents. To probe a first step into testing the two versions of the mobility argument, Model 2 of Table 3 shows the results of a diagonal reference model that introduces the continuous difference between parental and respondents' own education as predictor. It remains far from significant, however. But according to sub-Hypothesis 2a, only increasingly positive values of the difference (respondents with increasingly less education than their parents) should predict perceived discrimination. Model 3 of Table 3 therefore adds a regression spline (a break in the slope of the regression) to test this idea. The main effect of  $\Delta_{\text{Edu}}$  now shows the relation for respondents with increasingly less education than their parents, while the interaction term tests how this relation differs for those who have decreasingly more. The spline dummy tests whether there is a discontinuity at zero (where

respondents are as educated as their parents). In contradiction to sub-Hypothesis 2a, introducing the spline specification does not change the conclusion. Model 4 tests a simple categorical measure, which truncates the depth of the difference, as an alternative specification. But it also does not support sub-Hypothesis 2a. The final test is provided by (certainly over-specified) Model 5 of Table 3, which puts the interaction and the difference ( $\Delta_{\text{Edu}}$ ) against each other. It remains to be the interaction between parental and own education that emerges as statistically significant at the marginal level ( $p = 0.0902$ , two-tailed). Additional analyses that replicate Models 2 to 5 of Table 3 without considering controls for respondents' own and parental education, or that are based on the IAB-SOEP Migration sample (see below) come to the same conclusion (see online Supplement I). Because the interaction may be justified from both the narrow and the wide version of the argument, we cannot draw a decisive conclusion. However, if we take the narrow version seriously, the overall pattern of findings resonates better with the wide claim about unfulfilled mobility aspirations, which may also be found among children of immigrants who have reproduced or surpassed their parents' level of education.

#### *A Replication and Falsification Test Based on the IAB-SOEP Migration Sample*

Tests of statistical significance indicate whether a finding may have come about by happenstance. Another way to do the trick is to replicate the finding based on a different sample. Here I report results of a robustness replication that is based on a special sub-sample of the German Socio-Economic Panel, the IAB-SOEP Migration Sample (for details see Brücker et al. 2014). For reasons of brevity, I only detail aspects that are crucial to the design of the robustness test here.

In contrast to EURISLAM, the IAB-SOEP sampled among the general population of immigrant origin in Germany. The sample therefore entails large shares of West and East European persons of immigrant origin, most of whom are Christian and phenotypically hardly distinct from native Germans. A robustness replication based on the IAB-SOEP may thus be considered an austere test. But in contrast to EURISLAM (and the general SOEP, see Diehl and Liebau 2017), the IAB-SOEP entails seven questions about experiences of ethnic discrimination (with answer categories 'never', 'rarely', and 'often') in specific environments (e.g., school, work, everyday life). The IAB-SOEP thus overcomes both problems of

EURISLAM's generic indicator of perceived discrimination. Moreover, it allows me to implement the falsification test, whether my conjecture consistently predicts reports of experienced ethnic discrimination at school, but not in everyday life, by the police, and so on.

Reported experiences of ethnic discrimination at school or a refusal to answer define the sample of my robustness replication, since only respondents of immigrant origin who have been to school in Germany were asked this question. Moreover, I exclude third generation persons of immigrant origin (i.e., those whose grandparents were born abroad) and respondents who are currently enrolled in education. This results in a sample of  $n = 1,181$ . 311 of the respondents are second and 870 are 1.5<sup>th</sup> generation persons of immigrant origin. I operationalize the predictor, moderator and control variables as closely to the EURISLAM analysis as possible.<sup>8</sup>

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<sup>8</sup> The predictor variable is the educational status of the better-educated parent, captured in a variable that differentiates between 'no degree', 'secondary education', and 'tertiary education'. What is missing is the fourth category of 'primary education'. As moderator, I use respondents' own education indicated by their ISCED 97 score. Compared to EURISLAM respondents' own education is reported on a less detailed ISCED scale (subcategories A, B, and C are missing). It encompasses ISCED code 6, which identifies respondents with a tertiary master degree, but lacks ISCED code 0, which identifies persons without primary education. To calculate  $\Delta_{\text{Edu}}$ , I mapped the ISCED scale to the scale for parental education, just as I did for the EURISLAM analysis, and subtracted the former from the latter. Moreover, the robustness replication and falsification test adjusts for the same set of control variables, as the primary analysis of the EURISLAM survey with three exceptions. First, I cannot operationalize unconcealed religiosity. But the variable would also not make much sense in the very internationally composed IAB-SOEP. Second, instead of the native neighborhood share I control for the (former) classroom share of natives, which is arguable an even better control given the focus of the falsification test. Third, the IAB-SOEP did not capture local media consumption. Apart from these three deviations, the robustness test similarly considers age in years, gender, immigrant generation, country of origin categories (where case numbers allowed, I used the country of origin. But frequently enough I had to coarsen to wider categories such as persons of African origin), employment status, and language skills. The latter consist of a scale of the competencies to write, listen to and speak German. Each competence was captured on the scale: 'not at all', 'rather badly', 'fair', 'good', and 'very good'.

Table 4: Intergenerational Social Mobility and Perceived Discrimination in Different Areas of Life

	School	Housing market	Job market	Police	Everyday life	Work	Public administration
Respondents' education	<b>-0.0830*</b> <b>(-2.424)</b>	0.0520 (1.469)	0.0336 (0.970)	-0.0255 (-0.764)	-0.0178 (-0.508)	0.00805 (0.205)	0.0391 (1.093)
Parental education	<b>0.0538</b> <b>(1.379)</b>	-0.000351 (-0.009)	-0.0114 (-0.289)	0.0876* (2.542)	-0.00713 (-0.188)	0.0285 (0.683)	0.0402 (0.990)
*respondents' education	<b>-0.0858**</b> <b>(-2.908)</b>	0.000371 (0.012)	-0.0349 (-1.059)	-0.0000564 (-0.002)	0.0234 (0.744)	-0.0426 (-1.313)	-0.0391 (-1.217)
Controls	√	√	√	√	√	√	√
$R^2$	<b>0.133</b>	0.0644	0.0610	0.111	0.0516	.0320	0.0283

*Note:* Linear full information maximum likelihood (FIML) estimates with robust standard errors. Results are controlled for: age in years, gender, immigrant generation, country of origin categories, employment status, language skills, the (former) classroom share of natives, and parental monitoring. The full regression model for experienced discrimination at school with all controls is shown in Table F.2 in online Supplement F. *t* statistics in parentheses; \*  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

*Source:* IAB-SOEP Migration sample, author's own estimates.

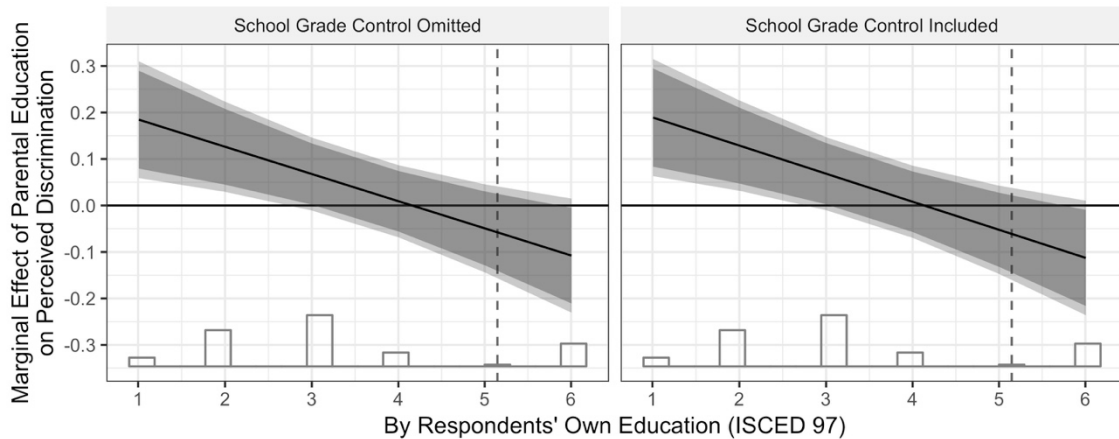


Table 4 displays seven regression models, with one model for each type of discrimination. The table displays hardly any (even marginally) significant associations. Respondents with better-educated parents feel more harassed by the police. But this association is not moderated by their own level of education. In fact, the only model that shows a (actually highly) significant moderation of parental education by respondents' own education is the regression of reported ethnic discrimination experienced at school. Thereby the robustness falsification test lends further credibility to the outlined intergenerational conjecture: parental education predicts perceived ethnic discrimination at school particularly among those who have attained only a mediocre level of education. But the same respondents do not report more frequently that they have been discriminated on the housing market, during job search and so on.

Yet, Table 4 shows no significant main effect of parental education and even a significantly negative main effect of respondents' own education. As online Supplement F discusses in greater detail, indeed neither the rather well-established integration paradox nor Hypothesis 1 replicate based on the IAB-SOEP—although there is evidence for an interaction between parental education and parental monitoring paralleling the robustness test of Figure 1. The IAB-SOEP replication is thus only partly successful.

Because this is disquieting, we should get a better impression of the moderation that does replicate Hypothesis 2. The left-hand panel of Figure 3 visualizes the estimated interaction effects. Despite the differences in sampling design, purpose of the surveys, and non-replicated findings regarding the integration paradox and Hypothesis 1, Figure 3 shows a striking replication of the left-hand panel of Figure 2. That is, among respondents with low educational attainment, parental education is a significant predictor of perceived discrimination at school. But as own educational attainment increases, the importance of parental education vanishes and, very similar to Figure 2, becomes insignificant at around an ISCED level of 3 to 4. Thus, the EURISLAM and IAB-SOEP findings mutually validate each other, and in combination they lend rather strong support for the proposed social mobility argument—even under consideration of the non-replication of Hypothesis 1.

Figure 3: The Marginal Effect of Parental Education on Perceived Ethnic Discrimination at School by Respondents' Own Education



*Note:* Marginal effects and associated 90 and 95% confidence intervals. Bars indicate the histogram of the moderating variable. The vertical gray dashed line shows where the observational space of the EURISLAM analysis (Figure 2) ends. These results are based on Model “School” of Table 4 and Model 2 of Table F.2 in online Supplement F.

*Source:* IAB-SOEP Migration sample, author’s own estimates.

Figure 3 offers another interesting piece of evidence. One might wonder, whether the evidence presented really supports the importance of an intergenerational perspective, or whether the results simply identify a population that has actually been discriminated and hence dropped out of school too early. Like most research on the topic, I am not able to distinguish actual exposure from cognitive susceptibility, and believe that probably both play a role in the underlying processes. Moreover, actual discrimination at school comes in multiple variants, such as mobbing by classmates or stereotypical portrayals of minorities in school materials, so that any attempt to completely rule it out as possible mechanism is deemed to fail. That said, according to a recent study that surveyed experiences discrimination in detail, personal experiences of unfair grading by teachers is one of the main sources of perceived ethnic discrimination at school (Beigang et al. 2017). It by far exceeds, for instance, reports of mobbing. The IAB-SOEP entails the final grades that respondents received in math, German, and their first foreign language. But adjusting for any differences in actual grades (i.e., the outcome of unfair grading by teachers), which should capture one of the main sources of actual discrimination at school that can plausibly explain early drop out, does not alter the main finding of this article. The right-hand panel of Figure 3, which displays results adjusted for actual school grades, is a mirror version of the left-hand

panel, which does not. This tips the balance in favor of the assumption that a certain tendency for ex-post rationalizations of failure plays a role.

## **Conclusion**

This article set out to add an intergenerational perspective to the study of perceived ethnic discrimination. I proposed the conjecture that parental education predicts perceived discrimination, particularly among those children of immigrants who have attained only mediocre levels of education themselves. I developed a narrow justification of this conjecture by arguing that perceived discrimination may derive from a loss of (educational) standing from one generation to the next, and a wide version which acknowledges that deficient social mobility may even lurk in attaining levels of education that lie beyond one's parents' education.

By analyzing the EURISLAM survey of (domestically-educated) Muslim persons of immigrant origin in six European countries, I was able to present original evidence that parental education indeed predicts increased levels of perceived discrimination. Moreover, the relation is particularly strong among those who have achieved low levels of education themselves and is absent among those with tertiary education. Additional analyses suggest that this finding is, by and large, stable across different sub-populations and contexts. In contrast to expectations derived from a narrow reading of the (intergenerational) social mobility argument, I found direct measures of downward mobility to produce largely inconsistent results. Although not conclusive, this and the exact pattern of the main finding (i.e., Figure 2) speak in favor of the wide version of the social mobility argument according to which persons of immigrant origin might actually not only aim to reproduce but aim to surpass their parents' education. A robustness replication based on the IAB-SOEP Migration Sample reconfirmed the main finding, but not the unconditional importance of parental education for perceived discrimination. The replication also provided two original pieces of evidence: the intergenerational pattern only holds for reports about ethnic discrimination experienced at school, but not in other life domains. On top of that, differences in actual school grades (a main source of actual discrimination at school) do not account for the finding.

While the core argument of this article revolves around intergenerational social mobility, an underlying assumption is that parental education, in one way or another, serves as a reference for mobility aspirations. It seems hard to puzzle out how the reported findings could come about without mobility aspirations as driving mechanism. As such, this article also speaks to the integration paradox literature: unfortunately, high aspirations may be another factor setting the stage for increased social exposure and cognitive susceptibility to experience discrimination. This may also be an unanticipated downside of immigrant optimism.

Nevertheless, the lack of a direct measure of aspirations is problematic against the fact that parental education is a less decisive indicator of educational aspirations among children of immigrants as compared to natives. Future research hopefully fills this gap. Lindemann (2017), for instance, shows that persons of immigrant origin who transition from school to a vocational training that does not meet their desired option report to have experienced discrimination more often. The results presented here would suggest that it is particularly children with better-educated parents who make this experience.

This directly leads me to the second shortfall of this study, which however haunts the vast majority of studies on perceived discrimination: the inability to distinguish social exposure to actual discrimination from cognitive susceptibility to frame experiences in terms of discrimination. It is this shortfall that fuels the highly controversial debate among pundits, policy makers and academics whether claims about xenophobia and discrimination are overblown, or to the contrary just the tip of the iceberg. In a striking parallel to Marxists' claims about 'false consciousness', some argue that the less integrated misconstrue the true extent of discrimination against them. By contrast, others suggest that the better integrated may be overly susceptible. British sociologists invented field-experimental correspondence studies in the 1960s to overcome surveys of perceived discrimination as best indicator of actual discrimination (Daniel 1968). Today field experiments regularly provide convincing testaments to the extent of discrimination. Hopefully the discipline has the capacity to solve the puzzle of the association of perceived and actual discrimination too.

On a final note, I would like to add that the social mobility argument laid out in this article is theoretically not limited to the children of immigrants. First of all, other groups are also exposed to discrimination and thereby hindered in realizing

their aspirations. But more importantly, the tendency to attribute personal failures to external causes is all too human and certainly also characterizes natives—for instance when they scapegoat persons of immigrant origin.

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# Online Supplement

## **“Social Mobility and Perceived Discrimination: Adding an Inter-generational Perspective”**

**Merlin Schaeffer**

University of Copenhagen

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## Supplement A: (Interaction-)Effect Heterogeneity

One might wonder whether the results reported in the manuscript conceal systematic differences between populations with respect to the main finding (i.e., how the relation between perceived discrimination and parental education is moderated by respondents' own education). *Immigrant generation* might matter, for instance, because the mechanism might work differently for those children of immigrants who were born and partly socialized abroad, as compared to second generation persons of immigrant origin, who spent their whole life in the country of residence. With regard to *gender* one could wonder, whether the reported moderation works similarly for men and women, given that parents might have gendered expectations about intergenerational mobility. *Time since schooling* (or *age* taken as a proxy) could be important because the failure of not reaching one's (parents') educational aspirations is more salient among those who have just finished school. *Ethnic identification* could matter by making the self-protective properties of stigma a cognitively more available option – an argument which even more applies to differences between *Muslim* and non-Muslim persons of immigrant origin. With respect to the difference between EURISLAM and IAB-SOEP one could also wonder whether the IAB-SOEP results would differ if we only focused on persons originating from the countries entailed in EURISLAM, that is, Morocco, Turkey, Pakistan and Ex-Yugoslavia. One could also wonder whether *striving to make one's parents proud* or *parental monitoring* should not alter the strength of failing to reach one's mobility goals. Finally, there might not be a theoretical reason to believe in country differences, but it is nevertheless important to know whether the main finding actually generalizes across all six *countries of residence* entailed in the EURISLAM survey. This supplement discusses whether there is empirical evidence for so-called 'effect heterogeneity' with respect to immigrant generation, time since schooling (or age), ethnic identification, country of residence, and religious denomination. Because gender is a cardinal dimension, there is a separate discussion of potential gender differences at the end of this supplement.

Testing for interaction-effect heterogeneity warrants estimating three-way interactions, that is, testing whether the interaction reported in the main document is significantly moderated by gender, ethnic identification, and so on. Note however, that three-way interactions are extremely demanding in terms of statistical power, because all three constitutive coefficients of the original interaction (the main effect of parental education, the main effect of respondents' own education, and their joint interaction term) should be interacted with the additional moderator (e.g., immigrant generation) (e.g., Brambor, Clark, and Golder 2006; Braumoeller 2004). This means four additional coefficients are being estimated: one further conditional main effect and three further joint interaction effects, among which one is the joint effect of three variables. Where country of origin is considered as additional moderator, this logic results in even more additional terms (see below). Interpreting the overall seven constitutive coefficients of a three-

way interaction is a highly complex task. Here however, we have no substantial interest in the overall pattern of the three-way interaction, but simply wish to test whether the moderation reported in the main manuscript varies across populations. To answer this specific question of what we might call ‘interaction-effect heterogeneity’, only one of these four additional terms is by and large decisive: the joint three-way effect, that is, the interaction of the original interaction term with the additional moderator. This term tests whether the moderation reported in the main manuscript is systematically larger or smaller for certain populations that are defined by the additional main effect. I will thus focus on this term.

Table A.1 displays the evidence for interaction-effect heterogeneity in the EURISLAM analysis. It reports results that are based on Model 1 of Table 3 in the main article. They only differ in that they introduce interaction effects by immigrant generation, age (taken as proxy of time since schooling), ethnic identification, and striving to make one’s parents proud. Model 1 in Table 3 in the main article reports an interaction effect of  $\beta = -0.109$  and  $t = -2.098$ . The third row of Table A.1 reports the same interaction, but now it is conditional on the “Main effect”, meaning it is conditional on the additional moderator being zero. Zero either indicates the reference group (e.g., 1.5th generation persons of immigrant origin), or the mean of the main effect if the additional moderator is continuous. It is already pretty telling that the effect sizes of these conditional interaction effects are pretty similar to the unconditional one reported in the main manuscript with  $\beta$ s of -0.135, -0.121, -0.111, and -0.095.

The important question with respect to interaction-effect heterogeneity is: do the three-way interaction terms (“\*parental education\*respondent’s education”) suggest that these conditional interaction terms look different at other values of the main effect of the additional moderator? The answer is clearly: *no*. With absolute  $t$ -ratios smaller than one, Table A.1 displays not even tentative evidence that the interaction of interest looks systematically (i.e., significantly) different among 2<sup>nd</sup> generation rather than 1.5<sup>th</sup> generation persons of immigrant origin, older persons for whom schooling is further away in the past, persons who identify less or stronger with co-ethnics, and finally those who strive to make their parents proud and those who do not.

Table A.1: Interaction-Effect Heterogeneity

Main effect of additional moderator:	2 <sup>nd</sup> generation		Age		Ethnic identity		Make parents proud	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
Respondents' education	0.206**	2.790	0.161**	2.694	0.157**	2.807	0.160**	2.826
Parental education	0.144*	1.984	0.153*	2.498	0.174**	3.273	0.176**	3.284
*respondents' education	-0.135 <sup>+</sup>	-1.875	-0.121*	-2.178	-0.111*	-2.113	-0.095 <sup>+</sup>	-1.792
Main effect	0.343**	3.219	-0.080	-1.281	-0.109*	-2.208	-0.052	-1.082
*respondents' education	-0.101	-0.961	0.008	0.140	-0.056	-1.083	0.053	1.018
*parental education	0.050	0.503	-0.028	-0.482	0.024	0.499	0.038	0.770
<b>*parental education</b>	<b>0.045</b>	<b>0.419</b>	<b>-0.032</b>	<b>-0.556</b>	<b>0.007</b>	<b>0.126</b>	<b>0.047</b>	<b>0.865</b>
<b>*respondents' education</b>								
Controls	√		√		√		√	
McFadden's Pseudo-R <sup>2</sup>	0.071		0.071		0.073		0.072	

*Note:* Logistic regression results; n = 2,478. Results are controlled for: age, gender, immigrant generation, country of origin and of residence categories, employment status, language skills, frequency of media consumption, the neighborhood share of natives, and unconcealed religiosity. \*  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

*Source:* EURISLAM survey, author's own estimates.

Table A.2: Interaction-Effect Heterogeneity by Country of Residence

	$\beta$	$t$
Respondents' education	0.153*	2.399
Parental education	0.179**	3.057
*respondents' education	-0.102 <sup>+</sup>	-1.655
<i>Belgium</i>	0.418***	3.573
*respondents' education	0.083	0.683
*parental education	-0.022	-0.173
<b>*parental education*respondents' education</b>	<b>0.194</b>	<b>1.508</b>
<i>Switzerland</i>	0.412**	3.011
*respondents' education	0.162	1.139
*parental education	0.242 <sup>+</sup>	1.745
<b>*parental education*respondents' education</b>	<b>-0.117</b>	<b>-0.750</b>
<i>France</i>	-0.221	-1.379
*respondents' education	0.006	0.034
*parental education	-0.169	-1.054
<b>*parental education*respondents' education</b>	<b>-0.018</b>	<b>-0.111</b>
<i>United Kingdom</i>	-0.868***	-6.928
*respondents' education	-0.174	-1.216
*parental education	-0.036	-0.321
<b>*parental education*respondents' education</b>	<b>-0.101</b>	<b>-0.799</b>
<i>Netherlands</i>	0.041	0.377
*respondents' education	-0.023	-0.184
*parental education	-0.050	-0.425
<b>*parental education*respondents' education</b>	<b>0.162</b>	<b>1.230</b>
Controls		√
McFadden's Pseudo $R^2$		0.075

Note: Logistic regression results; n = 2,478. Results are controlled for: age, gender, immigrant generation, country of origin and of residence categories, employment status, language skills, frequency of media consumption, the neighborhood share of natives, and unconcealed religiosity. <sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Source: EURISLAM survey, author's own estimates.

Another concern is whether the results are generalizable across all six countries involved in the EURISLAM survey. Testing this idea similarly warrants a three-way interaction, although one that entails five additional main effects for the country differences and therefore  $5 \times 3 = 15$  additional interaction effects. Again, the additional terms of interest are the three-way interaction terms. Note however, that I use weighted effects rather than classic dummy coding (for details see: Grotenhuis et al. 2017). This has the advantage that I do not estimate whether the moderation of interest is significantly different in some country as compared to the reference country. Instead, the conditional interaction of respondents' and parental education is estimated at the sample average and thus equals (apart from some rounding error) the result reported in the main manuscript. The advantage of this procedure is that the additional three-way interaction effects now test whether the results in the specific countries (i.e., UK, France etc.) significantly differ from the overall result reported in the main manuscript. As Grotenhuis et al. (2017) explain, this is in fact what motivated the development of (weighted) effects coding.

Table A.2 shows the results. At the sample average, the interaction of respondents and parental education is estimated as  $\beta = -0.102$  and  $t = -1.655$ . This result equals the one from the main manuscript, apart from the fact that the somewhat lower  $t$ -ratio shows how the 15 additional interaction terms come at the cost of statistical precision. With respect to the question of interest, the moderation is, statistically speaking (although the  $t$ -ratios for Belgium and the Netherlands are larger than one), just as negative in the five countries and (as additional analyses show) in Germany as it is for the overall pooled sample. By and large, the main finding of the manuscript may thus be regarded as to generally hold across the six countries entailed in the EURISLAM survey.

Table A.3: Interaction-Effect Heterogeneity

Main effect of additional moderator:	2 <sup>nd</sup> generation	Time since schooling	Ethnic identity	Parental monitoring	Muslim	EURISLAM sample definition
Respondents' education	-0.142*** (-3.615)	-0.0940* (-2.435)	-0.0736* (-2.082)	-0.0642* (-1.852)	-0.0892* (-2.269)	0.0749* (1.879)
Parental education	0.0599 (1.323)	0.0559 (1.423)	0.0553 (1.421)	0.0607 (1.538)	0.0844* (1.741)	0.0511 (1.052)
*respondents' education	-0.0870** (-2.681)	-0.0853* (-2.469)	-0.0885** (-2.936)	-0.105*** (-3.391)	-0.0953** (-2.722)	-0.0979** (-2.697)
Main effect	0.0194 (0.236)	-0.195 (-1.322)	-0.0602* (-1.860)	-0.0724* (-1.818)	-0.0629 (-0.701)	-0.185 (-1.521)
*respondents' education	0.197** (2.768)	0.0249 (0.615)	-0.0158 (-0.450)	0.0792* (1.990)	0.0206 (0.279)	-0.00713 (-0.097)
*parental education	-0.0116 (-0.147)	-0.0467 (-1.236)	0.00765 (0.217)	0.0472 (1.053)	-0.0891 (-1.129)	0.0153 (0.195)
<b>*parental education</b>	<b>0.0228</b>	<b>0.0117</b>	<b>-0.0182</b>	<b>0.0267</b>	<b>0.00394</b>	<b>0.0316</b>
<b>*respondents' education</b>	<b>(0.326)</b>	<b>(0.348)</b>	<b>(-0.589)</b>	<b>(0.765)</b>	<b>(0.055)</b>	<b>(0.448)</b>
$R^2$	0.141	0.137	0.138	0.149	0.134	.135

Note: Linear full information maximum likelihood (FIML) estimates with robust standard errors;  $n = 1,181$ . Results are controlled for: age, gender, immigrant generation, country of origin differences, employment status, language skills, and the (former) classroom share of natives.  $t$  statistics in parentheses, \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , \*\*\*\*  $p < 0.001$

Source: IAB-SOEP Migration sample, author's own estimates.

Thus far, there is hardly any evidence for interaction-effect heterogeneity. We now need to take a look at the IAB-SOEP replication. Table A.3 displays the evidence for interaction-effect heterogeneity in the IAB-SOEP analysis. It reports results that are based on Model "School" of Table 4 in the main article. The main article reports an interaction effect of  $\beta = -0.0858$  and  $t = -2.908$ . The third row of Table A.3 reports the same interaction, but now it is conditional on the "Main effect", meaning the additional moderator is zero. Zero either indicates the reference group (e.g., non-Muslims) or the mean of the main effect if the additional moderator is zero. As before, the effect sizes of these conditional interaction effects are pretty similar to the unconditional one reported in the main manuscript with  $\beta$ s of -0.0870, -0.0853, -0.0885, -0.105, -0.0953, and -0.0979. More importantly, these conditional interaction effects are not significantly different for any of the other populations (i.e., other values of the main effect of the

additional moderator). All absolute *t*-ratios of the three-way interaction effects are smaller than one.

Overall, neither the EURISLAM nor the IAB-SOEP analysis provide much evidence that the central result of the main manuscript (i.e., the association between parental education and perceived discrimination is moderated by respondents' own education) differs across populations. The only deviation from this overall conclusion is that the moderation does not seem to exist in Belgium.

Yet, to finally settle the question, we need to investigate potential differences by gender. Gender receives especially careful consideration, because the EURISLAM survey focuses on Muslim persons originating from countries where the majority of the population holds rather conservative gender-role attitudes. One could therefore expect pronounced gender differences in mobility aspirations. Parents might, for instance, hold lower mobility aspirations for their daughters as compared to their sons (Fleischmann and Kristen 2014) because of pronounced reservations against female labor market participation (Khoudja and Fleischmann 2015). This would suggest that the patterns shown in the main article should be less pronounced among women. On the other hand, if women are not expected to work because of traditional gender roles, they might as well continue schooling (Fleischmann and Kristen 2014). Research has accordingly shown that girls of Turkish origin tend to be more aspiring than boys (Dollmann 2017) and that, by and large, women of immigrant origin (including those originating from Muslim countries) tend to perform better at school and have higher educational attainment as compared to men (Fleischmann and Kristen 2014). This rather suggests that the reported relations could even be stronger for women. Note however, that women in general tend to feel less discriminated (see descriptive statistics in online Supplement H and Table 1 in the main article), which might counteract this expectation.

Against this background, a first look at the descriptive statistics reported in online Supplement H is helpful. Tables H.2 and H.4 show descriptive sample statistics by gender for the EURISLAM and IAB-SOEP samples respectively. The tables show very similar descriptive statistics across women and men with regard to the central predictors of the study, that is, education, parental education, downward mobility, making parents proud, and even parental monitoring. Only if we operationalize parental education as mothers' education for women and fathers' education for men (labelled "parental education (gendered)") do we see a slightly lower level of parental education for women in both samples. The lack of differences with regard to parental monitoring might stem from the fact that these statistics are based on the overall IAB-SOEP sample, which includes many non-Muslim persons originating from Western Countries. But even if we restrict the sample to Muslim persons of immigrant origin stemming from the same countries as the respondents of the EURISLAM survey, we find hardly any difference in parental monitoring between men (mean = 1.50, SD = 0.978) and women (mean = 1.63, SD =



1.032), and the small difference is also not statistically significant ( $\Delta = -.130$ ,  $p = 0.158$ ). In conclusion, the descriptive statistics do not indicate any considerable gender differences.

This does not preclude, of course, gender differences in the relations discussed in the main article. Table A.4 tests whether any of the EURISLAM results reported in the main article varies by gender. Methodologically, this test follows the same standards as those discussed in Tables A.1 to A.3, making the overall model rather complex. Table A.4 therefore highlights as thick those interaction coefficients that provide the crucial test. There is no indication of any systematic differences by gender.

One reason for that might be the measurement of parental education as the education of the better educated parent. Maybe women base their aspirations on their mother's education while men focus on their father's. Column "Model 1 Table 3 gender-specific parental education" shows, however, that we come to the same conclusion based on this alternative measure of parental education: no indication of systematic gender differences. Finally, Table A.5 provides the same conclusions based on the IAB-SOEP sample. Overall, these twelve additional tests produce not a single indication of gender differences for any of the results reported in the main article. This is irrespective of whether we analyze EURISLAM or the IAB-SOEP, or whether we use a gender-specific measure of parental education.

Table A.4: Interaction-Effect Heterogeneity by Gender

	Model 2 Table 2		Model 3 Table 2		Model 1 Table 3		Model 1 Table 3 gender-specific parental education		Model 2 Table 3		Model 4 Table 3	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
Respondents' education	0.175**	3.149	0.174**	3.123	0.124 <sup>+</sup>	1.687	0.155*	2.136				
Parental education	0.150*	2.269	0.153*	2.255	0.187**	2.718	0.138*	2.081				
*respondents' education					-0.116 <sup>+</sup>	-1.711	-0.097	-1.468				
Make parents proud			0.023	0.372								
*parental education			0.069	1.065								
$\Delta_{\text{Edu}}$									-0.067	-0.834		
Educational Mobility												
Down											-0.280	-1.299
Up											0.042	0.243
Female	-0.311***	-3.394	-0.321***	-3.475	-0.328***	-3.452	-0.300**	-3.110	-0.309**	-3.127	-0.418*	-2.521
*respondents' education					0.079	0.765	0.067	0.644				
<b>*parental education</b>	<b>-0.018</b>	<b>-0.201</b>	-0.021	-0.223	-0.036	-0.370	-0.091	-0.914				
*make parents proud			-0.128	-1.493								
<b>*parental education</b>			<b>0.021</b>	<b>0.228</b>								
<b>*make parents proud</b>												
<b>*parental education</b>					<b>0.020</b>	<b>0.182</b>	<b>0.053</b>	<b>0.490</b>				
<b>*respondents' education</b>												
* $\Delta_{\text{Edu}}$									<b>-0.002</b>	<b>-0.024</b>		
<b>*down</b>											<b>0.286</b>	<b>1.082</b>
<b>*up</b>											<b>0.110</b>	<b>0.540</b>
<b>Controls</b>	✓		✓		✓		✓		✓		✓	
$\omega$ : weight of parental education									0.449	5.659	0.437	4.910
Diagonal education intercepts												
$\mu_{11}$ : low									0.030	0.143	-0.039	-0.165
$\mu_{22}$ : medium									0.535	3.041	0.551	2.593
$\mu_{33}$ : high									1.239	4.747	1.358	4.758
McFadden's Pseudo R <sup>2</sup>	0.069		0.071		0.071		0.068		0.065		0.066	

Note: Model 1 to Model 4 are logistic regression models. Model 5 and Model 6 are logistic diagonal reference models. Results are controlled for: age, gender, immigrant generation, country of origin and of residence categories, employment status, language skills, frequency of media consumption, the neighborhood share of natives, and unconcealed religiosity. n = 2,478; <sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Source: EURISLAM survey, author's own estimates.

Table A.5: Interaction-Effect Heterogeneity by Gender

	Model 4 Table F.2		Model 1 Table F.2		Model 1 Table F.2 gender-specific parental education		Model 2a Table I.2		Model 3a Table I.2	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
Respondents' education	-0.067 <sup>+</sup>	-1.90	-0.025	-0.51	-.023	-0.45				
Parental education	0.032	0.58	-0.003	-0.05	-.017	-0.32				
*respondents' education	-0.101**	-3.28	-0.090 <sup>+</sup>	-1.94	-.087 <sup>+</sup>	-1.87				
Make parents proud	-0.080	-1.42								
*parental education	0.102 <sup>+</sup>	1.67								
$\Delta_{\text{Edu}}$							0.405	1.30		
Spline							0.462	1.01		
* $\Delta_{\text{Edu}}$							-0.502	-1.51		
Educational Mobility										
Down									-.212	-0.61
Up									0.355	1.07
Female	-0.070	-1.22	-0.082	-1.33	-0.086	-1.39	0.210	0.26	-.152	-1.20
*respondents' education			-0.119 <sup>+</sup>	-1.85	-0.114 <sup>+</sup>	-1.80				
<b>*parental education</b>	0.023	0.32	0.118 <sup>+</sup>	1.68	0.103	1.45				
*make parents proud	0.066	1.01								
<b>*parental education</b>	<b>-0.055</b>	<b>-0.68</b>								
<b>*make parents proud</b>										
<b>*parental education</b>			<b>0.017</b>	<b>0.29</b>	<b>0.017</b>	<b>0.29</b>				
<b>*respondents' education</b>										
* $\Delta_{\text{Edu}}$							<b>-0.056</b>	<b>-0.09</b>		
<b>*spline</b>							<b>-0.344</b>	<b>-0.40</b>		
<b>*spline*<math>\Delta_{\text{Edu}}</math></b>							<b>0.183</b>	<b>0.29</b>		
<b>*down</b>									<b>0.273</b>	<b>1.28</b>
<b>*up</b>									<b>-0.134</b>	<b>-0.54</b>
Controls	√		√		√		√		√	
$\omega$ : weight of parental education							-0.401	-0.55	-3.456	-0.61
Diagonal education intercepts										
$\mu_{11}$ : low							-0.478	-0.90	0.112	0.33
$\mu_{22}$ : medium							-0.316	-0.61	0.088	0.26
$\mu_{33}$ : high							-0.567	-0.97	-0.037	-0.09
McFadden's Pseudo R <sup>2</sup>	0.145		0.137		0.136		0.108		0.104	

Note: Model 1 to Model 3 are linear full information maximum likelihood (FIML) estimates with robust standard errors with n = 1,181. Model 4 and Model 5 are linear diagonal reference models with n = 512. Results are controlled for: age, gender, immigrant generation, country of origin differences, employment status, language skills, and the (former) classroom share of natives.  $t$  statistics in parentheses, <sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Source: IAB-SOEP Migration sample, author's own estimates.

## Supplement B: Perceived Group Discrimination

The EURISLAM survey also entails questions on perceived group rather than personal discrimination (with answer categories ‘never’, ‘rarely’, ‘occasionally’, and ‘frequently’). These two items correlate by  $r = 0.603$ :

*In general, how often do you think the following groups experience hostility or unfair treatment because of their ethnic origin or religious faith in [CR]?*

*People of [ethnicity of country of origin (CO)]*

*Muslims living in [CR]*

In light of Quillan’s (2006) discussion of how to measure discrimination accurately, one might wonder, whether personal or group discrimination is the comparatively more accurate indicator of discrimination experiences. In this supplement, I first discuss this question first from a survey item perspective and then summarize how the question has been discussed among psychologists. Overall, my discussion concludes that whether personal or group discrimination is a more accurate measure remains unclear. Yet, it is rather evident that personal and group discrimination measure distinct aspects and should therefore not be compared against each other simply in terms of measurement accuracy. Only accounts of personal discrimination are systematically linked to negative outcomes (such as poor health and well-being) and they are more closely related to well-established predictors of the integration paradox. For this reason, perceived personal discrimination is the appropriate dependent variable for this study.

Starting from the angle of *survey item quality*, the questions on perceived group discrimination are vaguer than the question on personal experiences of unfair treatment; they ask respondents what they think that others who are alike tend to experience. By contrast, the dependent variable analyzed in the main article asks respondents about their own experiences. So, whereas the questions on group discrimination involve recollection of events and guesswork, the question on personal experiences only involves recollection of personal experiences. The results of the robustness analysis of the IAB-SOEP also underline that questions about specific personal experiences make a difference; the falsification test shows that discrimination experienced at work, in everyday life, and so on cannot be predicted by the outlined explanation.

To support this argument against analyzing group discrimination, Table B.1 reports OLS regression results of a model that mirrors Model 1 displayed in Table 3 of the main article, but takes perceived group discrimination as dependent variable. The key findings reported in the main article do not emerge; only the direction of the interaction term is similar. In defense of my claims one should note, however, that the relations between perceived group discrimination and nearly all predictors are less precisely estimated as a comparison of the  $t$ -ratios reported

in Model 2 of Table 2 versus Table B.1 indicates. This holds for the ethnic group and country differences, age, gender, and the generation differences. But it also holds for the integration paradox predictors: the conditional main effect of respondents' own education, the neighborhood share of natives, and being openly (i.e., unconcealed) religious. In conclusion, the results displayed in Table B.1 may somewhat question the findings reported in the main article. But they mostly question the reliability of perceived group discrimination as dependent variable in studies on the integration paradox and related topics.

Table B.1: Prediction of Perceived Group Discrimination

	$\beta$	$t$
(Intercept)	0.269**	3.084
Respondents' education	0.030	0.965
2. Generation	0.160**	3.001
Employed	0.048	0.844
Media consumption	0.013	0.379
Language skills	0.031	0.823
Native neighborhood share	0.036	1.597
Unconcealed religiosity	0.035	1.297
Country of residence (reference: Germany)		
Belgium	-0.126 <sup>+</sup>	-1.706
Switzerland	-0.194 <sup>*</sup>	-2.539
France	-0.111	-1.007
UK	-0.659***	-9.709
Netherlands	-0.041	-0.476
Country of origin (reference: Pakistan)		
Ex-Yugoslavia	-0.157 <sup>+</sup>	-1.741
Turkey	-0.040	-0.496
Morocco	-0.047	-0.523
Female	0.072	1.416
Age (in years)	-0.005	-0.150
Parental education	0.006	0.237
*respondents' education	-0.015	-0.558
Adj. R <sup>2</sup>	0.073	

Note: OLS regression results; n = 2,478; <sup>+</sup>  $p < 0.10$ , <sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$

Source: EURISLAM survey, author's own estimates.

Under the term “personal-group discrimination discrepancy”, there is also a well-established *debate among Psychologists* about the difference between personal and group discrimination. This debate was sparked when scholars noted that personal accounts of experienced discrimination are systematically lower than accounts of group discrimination (e.g., Taylor et al. 1990). The question arose, whether one was more accurate than the other. A prominent perspective holds that personal accounts are less accurate. One reason put forward is that people are seen as discounting personal experiences of discrimination to uphold their self-esteem and an illusion of control (Ruggiero and Taylor 1995). In addition, some argue that single personal experiences are complex events that offer many alternative explanations, whereas societal discrimination against minority groups is more obvious and easy to perceive (Crosby et al. 1986). However, others note that perceived group discrimination is a function of auto-stereotypes that are generally held in the in-group community (Taylor, Ruggiero, and Louis 1996), or that the higher figures for group discrimination may stem from a cognitive process in which persons add experiences of others to their personal experiences of discrimination (Taylor et al. 1990). In summary, psychology has established cognitive mechanisms (and evidence for their actual working) according to which personal experiences of discrimination are potentially discounted or minimized, while accounts of group discrimination are potentially inflated. The existence and investigation of the personal-group discrimination discrepancy is therefore inconclusive on whether one is a more accurate than the other.

What seems more important than measurement accuracy is that psychologists come to emphasize how personal and group discrimination are two separate concepts with distinct consequences for minorities. Most importantly, they have noted that whereas perceived personal discrimination is associated with negative outcomes for minorities, the opposite holds for perceived group discrimination. That is, studies report positive associations between perceived group discrimination and higher well-being or better health, but negative ones for perceived personal discrimination (Bourguignon et al. 2006; Hagiwara, Alderson, and Mezuk 2016). The reason seems to be that perceived personal discrimination is a direct stressor, whereas perceived group discrimination triggers cognitive processes of relative advantage (as compared to other in-group members). In summary, it is unclear whether personal or group discrimination is the more accurate measure. But in this analysis, perceived personal discrimination responds closer to all well-established predictors, and as a detrimental outcome it is simply more relevant.

### Supplement C: Results Adjusted for Base Set of Controls Only

Controls are problematic, if they condition on those mechanisms that we believe to bring about the effect of interest (Morgan and Winship 2007; Pearl 2009). The central result reported in the main manuscript is adjusted for such variables and thus subject to this critique. To show that the main result also holds, if the analysis is not controlled for mediating variables, Table C.1 presents results that are only adjusted for the base set of control variables. Given the cross-national design of the EURISLAM survey, it remains important to control for country of residence and origin differences. Apart from these, only gender is also considered. Table C.1 re-confirms the core result of the main article.

Table C.1: Intergenerational Social Mobility and Perceived Discrimination, Only Base Set of Control Variables

	$\beta$	$t$
(Intercept)	-0.233	-1.598
Respondents' education	0.185***	3.478
Country of residence (reference: Germany)		
Belgium	0.073	0.502
Switzerland	0.000	0.002
France	-0.532***	-3.594
UK	-1.366***	-9.256
Netherlands	-0.339*	-2.486
Country of origin (reference: Pakistan)		
Ex-Yugoslavia	-0.086	-0.552
Turkey	0.286*	2.143
Morocco	0.501**	3.465
Female	-0.233**	-2.680
Parental education	0.188***	3.639
*respondents' education	-0.108*	-2.111
McFadden's Pseudo-R <sup>2</sup>	0.061	

Note: Logistic regression results; n = 2,478; \*  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Source: EURISLAM survey, author's own estimates.

### **Supplement D: Linear Probability Models**

Non-linear models may be biased with respect to the comparison of groups, interpretation of interaction effects, and comparisons of coefficients across models (e.g., Breen, Karlson, and Holm 2018; Mood 2010). The main article hence visualizes marginal effects. Another remedy against these problems is to estimate linear probability models with robust standard errors. Table C.2 reports results of such models for the same specification of Model 2 of Table 2 and Model 1 and Model 3 of Table 3 in the main article. We see that the reported relations and moderations remain and that parental education is a quite stronger predictor of perceived discrimination than respondents' own education.



Table D.1: Intergenerational Social Mobility and Perceived Discrimination, Linear Probability Model with Robust Standard Errors

	Model 2 of Table 2		Model 1 of Table 3		Model 5 of Table 3	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
(Intercept)	0.407***	10.954	0.410***	11.054	0.431***	10.229
Respondents' education	0.035**	3.004	0.032**	2.732	0.063**	2.601
2. Generation	0.071**	3.227	0.073***	3.319	0.072**	3.263
Employed	-0.006	-0.260	-0.006	-0.272	-0.008	-0.353
Media consumption	0.015	1.139	0.015	1.198	0.016	1.250
Language skills	-0.005	-0.296	-0.006	-0.397	-0.006	-0.386
Native neighborhood share	0.019*	1.970	0.019*	1.985	0.019*	2.007
Unconcealed religiosity	0.019*	1.699	0.018*	1.694	0.018*	1.686
Country of residence (reference: Germany)						
Belgium	-0.009	-0.270	-0.005	-0.128	0.000	-0.005
Switzerland	-0.010	-0.278	-0.007	-0.194	0.002	0.051
France	-0.143***	-4.138	-0.138***	-3.960	-0.136***	-3.884
UK	-0.298***	-9.755	-0.295***	-9.689	-0.295***	-9.637
Netherlands	-0.092**	-2.837	-0.091**	-2.796	-0.086**	-2.635
Country of origin (reference: Pakistan)						
Ex-Yugoslavia	0.000	0.000	-0.002	-0.046	-0.004	-0.104
Turkey	0.082**	2.754	0.082**	2.745	0.080**	2.680
Morocco	0.112***	3.588	0.112***	3.593	0.113***	3.599
Female	-0.068***	-3.399	-0.068***	-3.421	-0.070***	-3.486
Age (in years)	-0.018	-1.429	-0.017	-1.338	-0.016	-1.286
Parental education	0.031**	2.849	0.037***	3.318	-0.002	-0.059
*respondents' education			-0.025*	-2.343	-0.025*	-1.905
$\Delta_{\text{Edu}}$					0.039	0.824
Spline					0.004	0.116
* $\Delta_{\text{Edu}}$					0.017	0.374
Adj. R <sup>2</sup>	0.079		0.081		0.081	

Note: Results are based on linear probability models with robust standard errors; n = 2,478; +  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Source: EURISLAM survey, author's own estimates.

## Supplement E: Categorical Predictors

Another objection to the main model specification reported in the article is the assumption that parental education and respondents' own education are linear predictors of perceived discrimination. The main article visualizes results of models that do not make this assumption (the right-hand panels of Figure 1 and Figure 2). The visualization is based on results of regression models that are displayed in Table E.1.

Table E.1: Intergenerational Social Mobility and Perceived Discrimination with Education Variables as Categorical Predictors

	Model 1		Model 2	
	$\beta$	$t$	$\beta$	$t$
Respondents' education (reference: low)				
intermediate	0.453***	3.846	0.585***	3.839
high	0.421**	2.875	0.638**	3.181
Parental education (reference: low)				
intermediate	-0.118	-0.526	0.176	0.800
high	-0.215	-0.894	1.022***	3.677
P.intermediate*R.intermediate			-0.004	-0.017
P.intermediate*R.high			-0.214	-0.667
P.high*R.intermediate			-0.830**	-2.658
P.high*R.high			-0.867*	-2.398
Make parents proud (reference: disagree)				
agree	-0.325 <sup>+</sup>	-1.879		
strongly agree	-0.347*	-2.004		
P.intermediate*R.agree	0.402	1.447		
P.high*R.agree	0.688*	2.299		
P.intermediate*R.strongly agree	0.184	0.667		
P.high*R.strongly agree	0.719*	2.345		
Controls		√		√
McFadden's Pseudo-R <sup>2</sup>		0.073		0.073

Note: Logistic regression results; n = 2,478. Results are controlled for: age, gender, immigrant generation, country of origin and of residence categories, employment status, language skills, frequency of media consumption, the neighborhood share of natives, and unconcealed religiosity. <sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Source: EURISLAM survey, author's own estimates.

## Supplement F: Additional IAB-SOEP Results

This supplement reports several additional results of the IAB-SOEP replication. Most importantly, Model 1 of Table F.2 displays the full regression model underlying Model “School” of Table 4 in the main article. Model 2 and Model 3 of Table F.2 add controls for actual school grades. Model 2 adds a factor score that summarizes the information of the math, German and first foreign language grade. The factor analysis suggests a one factor solution with all three factor scores higher than 0.6. Figure 3 of the main article is based on Model 2 of Table F.2. Model 3 of Table F.2 shows that the results do not change, if we control for all three grades received separately, although this strategy runs into the risk of producing multicollinearity. The school grades were transformed so that higher scores imply better grades, which also holds for the factor score. Yet, there is no evidence that those with better grades report experiences of discrimination at school more often.

Figure F.1 visualizes the results of Model 4 of Table F.2. It is an attempt to replicate the results reported in Figure 1 of the main article. The IAB-SOEP contains no measure of the intention to make one’s parents proud. But it entails a correlate, that is, a measure which indicates whether the parents emphasized educational attainment and thus potentially also educational reproduction: ‘How strongly did your parents monitor your performance at school?’: ‘Very strongly’, ‘Strongly’, ‘Not much’, ‘Not at all’. If the assumption that parental education serves as an important point of reference is valid, it should hold especially for those who have parents that stressed school performance. The result is somewhat dependent on the particular model specification, as the dashed (insignificant) line shows. However, in tendency and under certain specifications, the result mirrors that of the EURISLAM analyses.

Finally, Table F.1 replicates Model 2 of Table 2 of the main article. We see that in contrast to the main analysis and hypothesis 1, there is no direct average association between parental education and perceived discrimination at school. The coefficient shows the expected direction, but is statistically insignificant ( $p = 0.34$ , two-tailed). This is insofar astonishing, as Hypothesis 2 does replicate—as does, by and large, the robustness test which plausibilizes parental education as indicator of mobility aspirations (see Figure F.1). A closer inspection of Figure 3 of the main article seems to hint at a potential answer. The non-interacted coefficient of parental education can be understood as the average coefficient across the distribution of respondents’ own education. In contrast to the EURISLAM analysis, a comparatively large share of respondents with ISCED level 6 (i.e., a tertiary Master degree) pull the association into (not statistically significant, but nevertheless) negative terrain. Thereby they counterbalance the influence of the less educated on the average coefficient. This contrasts with Figure 2, which is based on EURISLAM. Moreover, about 82% of these respondents are from European or other countries that would not have been considered by EURISLAM. Table F.1 therefore contains a model that excludes respondents with ISCED level 6. We see that the parental

education coefficient indeed doubles in strength, but it still does not reach conventional levels of statistical significance ( $p = 0.16$ , two-tailed).

It is also noteworthy that the integration paradox does not replicate in the IAB-SOEP. Respondents' own education is either negatively or not associated to perceived discrimination at school, and there are also no generational differences. Only the native classroom share reflects the finding about the share of natives in the neighborhood; both go along with more perceived discrimination. But those with better language skills even report less discrimination experienced at school. This might have to do with the fact that the IAB-SOEP intended to sample on recent immigrants and contains large shares of phenotypically indistinct Christian immigrants. That is, the IAB-SOEP sampled among populations for whom the awareness and cognitive susceptibility increasing mechanisms proposed by the integration paradox hardly matter, as Flores (2015) argues for instance. Nevertheless, these non-findings are disquieting. Yet, against the fact that even the well-established integration paradox does not replicate in the IAB-SOEP, it is quite reassuring that the main finding of the article does.

Table F1: Perceived Discrimination at School Regressed on Established Determinants and Parental Education

	Model 2 of Table 2		Model 2 of Table 2 Excluding ISCED 6	
	$\beta$	$t$	$\beta$	$t$
Respondents' education	-0.0917**	-2.661	-0.0539	-0.860
2. Generation	0.0329	0.428	-0.0386	-0.435
Employed	0.0381	0.407	0.102	1.065
Language skills	-0.195***	-6.149	-0.213***	-6.014
Native classroom share	0.0580*	2.370	0.0497+	1.775
Country of origin (reference: Turkey)				
Ex-Yugoslavia	-0.207*	-2.020	-0.246*	-2.122
Greece	0.0458	0.305	-0.0899	-0.541
Italy	-0.0540	-0.374	-0.0527	-0.326
Spain	-0.140	-0.581	-0.182	-0.550
Romania	-0.0648	-0.457	-0.180	-1.137
Poland	0.00317	0.027	-0.0302	-0.228
Russia	0.0784	0.641	0.0366	0.259
West	-0.466*	-1.967	-0.199	-0.634
Africa	-0.146	-0.847	-0.0968	-0.482
Asia	0.152	0.867	0.269	1.018
Latin America	0.287	0.859	-0.122	-0.346
Grand Middle East	-0.207+	-1.872	-0.242*	-1.973
Eastern Europe	0.136	1.219	0.111	0.898
Female	-0.0940+	-1.651	-0.0696	-1.068
Age (in years)	-0.0162***	-5.162	-0.0172***	-4.658
Parental education	0.0375	0.963	0.0647	1.400
Constant	0.301	1.620	0.366+	1.813
Observations	1,181		922	
$R^2$	0.125		0.130	

Note: Linear full information maximum likelihood (FIML) estimates with robust standard errors.  $n = 1,181$ ; +  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Source: IAB-SOEP Migration sample, author's own estimates.

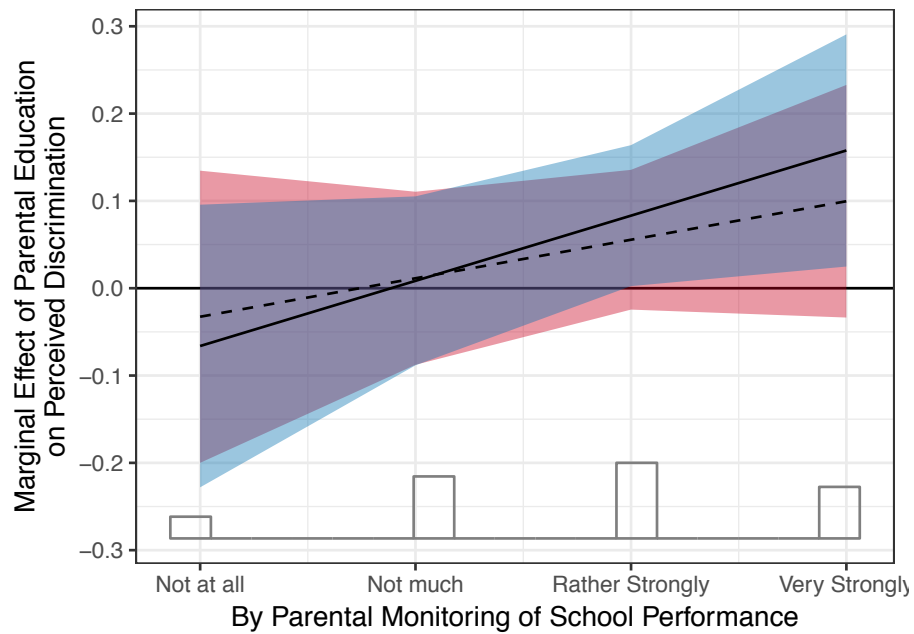
Table F.2: Intergenerational Social Mobility and Perceived Ethnic Discrimination at School

	Model 1		Model 2		Model 3		Model 4	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
Respondents' education	-0.0830*	-2.424	-0.0668*	-1.713	-0.0672*	-1.819	-0.0517	-1.309
2. Generation	0.0256	0.334	0.0216	0.280	0.0301	0.385	0.0173	0.224
Employed	0.0328	0.354	0.0257	0.274	0.0194	0.208	0.00962	0.102
Language skills	-0.192***	-6.105	-0.194***	-6.117	-0.204***	-6.190	-0.199***	-6.235
Native classroom share	0.0560*	2.298	0.0553*	2.267	0.0575*	2.357	0.0506*	2.066
Country of origin (reference: Turkey)								
Ex-Yugoslavia	-0.244*	-2.358	-0.236*	-2.258	-0.227*	-2.129	-0.219*	-2.101
Greece	0.0538	0.356	0.0606	0.400	0.0872	0.572	0.0469	0.309
Italy	-0.0474	-0.330	-0.0451	-0.315	-0.0214	-0.148	-0.0576	-0.407
Spain	-0.113	-0.467	-0.101	-0.414	-0.135	-0.573	-0.160	-0.647
Romania	-0.102	-0.727	-0.0761	-0.525	-0.0863	-0.579	-0.0820	-0.562
Poland	-0.0391	-0.330	-0.0220	-0.184	0.00438	0.035	-0.0178	-0.148
Russia	0.0571	0.467	0.0648	0.528	0.0643	0.506	0.0736	0.603
West	-0.391	-1.639	-0.360	-1.480	-0.351	-1.439	-0.344	-1.385
Africa	-0.169	-0.976	-0.165	-0.962	-0.151	-0.870	-0.172	-0.960
Asia	0.134	0.768	0.132	0.756	0.192	1.075	0.133	0.760
Latin America	0.305	0.985	0.283	0.923	0.299	0.990	0.288	0.954
Grand Middle East	-0.219*	-1.949	-0.213*	-1.896	-0.204*	-1.765	-0.189	-1.636
Eastern Europe	0.130	1.171	0.140	1.245	0.151	1.319	0.167	1.474
Female	-0.0783	-1.374	-0.0679	-1.163	-0.0336	-0.554	-0.0731	-1.254
Age (in years)	-0.0148***	-4.667	-0.0146***	-4.527	-0.0148***	-4.561	-0.0159***	-4.799
Parental education	0.0538	1.379	0.0541	1.386	0.0525	1.316	0.0640	1.632
*respondents' education	-0.0858**	-2.908	-0.0886**	-2.987	-0.0873**	-2.952	-0.103***	-3.342
School grade (factor score)			-0.0408	-0.840			-0.0306	-0.630
German					-0.0551	-1.164		
Math					0.0614	1.608		
First foreign language					-0.0424	-0.958		
Parental monitoring							-0.0672*	-1.819
*parental education							0.0703*	1.749
$R^2$	0.133		0.134		0.139		0.143	

Note: Linear full information maximum likelihood (FIML) estimates with robust standard errors. n = 1,181; +  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Source: IAB-SOEP Migration sample, author's own estimates.

Figure F.1: The Marginal Effect of Parental Education on Perceived Discrimination by Parental Monitoring of School Performance



*Note:* Marginal effects and associated 95% confidence intervals. Bars indicate the histogram of the moderating variable. The solid line is based on Model 4 of Table F.2 while the dashed line is based on a similar model that simply excludes the interaction between parental and respondent's education.  
*Source:* IAB-SOEP Migration sample, author's own estimates.

### Supplement G: Falsification Test Among Respondents Who Attended School Abroad

The main manuscript clarifies that the argument put forward applies only to children of immigrants who have actually attended school in their country of residence. There is no reason to assume that those who have experienced downward mobility in their country of origin before emigrating should more often feel discriminated by natives in their current country of residence. The flipside of this is that we should, as a falsification test, not find a significant interaction of respondents' own education and parental education among immigrants who have attended school in their country of origin. Note however, that there could be positive associations of own education and parental education with perceived discrimination. After all, Portes et al. (1980) argue that higher levels of education help people to comprehend the true extent of discrimination against them and increase the probability of international downward mobility (Doorn, Scheepers, and Dagevos 2013; Steinmann 2018). Table G.1 shows results based on the EURISLAM survey for respondents who visited school abroad. In line with the idea of this falsification test, the main result of the article does not replicate for this population. A similar falsification test based on the IAB-SOEP is not possible, because those who attended school abroad were never asked about discrimination at school.

Table G1: Intergenerational Social Mobility and Perceived Discrimination Among Those Who Attended School Abroad

	$\beta$	$t$
Respondents' education	0.092 <sup>+</sup>	1.785
Parental education	0.166 <sup>**</sup>	3.244
*respondents' education	-0.045	-1.017
Controls	$\sqrt{\phantom{x}}$	
McFadden's Pseudo-R <sup>2</sup>	0.023	

*Note:* Logistic regression results;  $n = 2,428$ . Results are controlled for: age, gender, country of origin and of residence categories, employment status, language skills, frequency of media consumption, the neighborhood share of natives, and unconcealed religiosity. <sup>+</sup>  $p < 0.10$ , <sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$ .

*Source:* EURISLAM survey, author's own estimates.

## **Supplement H: Descriptive Sample Statistics**

This online Supplement shows descriptive sample statistics for the variables used in the analyses. Note that all tables are based on un-imputed data. Table H.1 shows descriptive sample statistics for the overall EURISLAM sample. Table H.2 shows EURISLAM descriptive sample statistics by education and by gender. Interestingly, Table H.2 shows little gender differences in the central predictor variables (education, parental education, or striving to make one's parents proud). Only if we focus on mothers' education for women and fathers' education for men do we see a difference in parental education across genders. But even that difference does not seem strikingly large. Table H.3 shows descriptive sample statistics for the overall IAB-SOEP Migration sample. Table H.4 shows IAB-SOEP descriptive sample statistics by education and by gender. Maybe less surprisingly, Table H.4 again shows hardly any gender differences with respect to the explanatory variables, including parental monitoring. Finally, Table H.5 shows descriptive sample results on social mobility and perceived discrimination for the IAB-SOEP sample in the same fashion as Table 1 in the main manuscript.



Table H.1: Descriptive Sample Statistics for the Overall EURISLAM Sample

	Mean / %	SD	Min	Max
Respondents' education	28.35	10.44	0	42
Respondents' education (without sub-levels)	3.02	1.25	0	5
Categorical				
Low	25.02			
Medium	55.00			
High	19.98			
Parental education (gendered)	2.28	1.20	1	5
Parental education	2.61	1.24	1	5
Categorical				
Low	50.30			
Medium	28.42			
High	21.28			
$\Delta_{\text{Edu}}$	-0.62	1.46	-4	4
Categorical				
Equal	28.76			
Down	18.75			
Up	52.49			
Make parents proud	2.10	0.86	0	3
Media consumption	2.88	1.09	0	4
Language skills	3.56	0.82	0	4
Native neighborhood share	2.71	1.11	0	4
Unconcealed religiosity	1.34	0.76	0	2
Age	35.18	10.48	18	89
Ethnic identity	2.98	1.02	0	4
Perceived discrimination	38.44	48.65		
2. Generation	54.20	49.83		
Employed	67.77	46.74		
Women	50.44	50.01		
Country of origin				
Germany	22.84	41.99		
Belgium	14.65	35.37		
Switzerland	11.74	32.20		
France	13.52	34.20		
United Kingdom	21.27	40.93		
Netherlands	15.98	36.65		

Source: EURISLAM survey, author's own estimates.

Table H.2: Descriptive Sample Statistics for the EURISLAM Sample by Education and Gender

	Education						Gender			
	Low		medium		High		Men		Women	
	Mean / %	SD	Mean / %	SD	Mean / %	SD	Mean / %	SD	Mean / %	SD
Parental education (gendered)	2.01	1.09	2.34	1.19	2.53	1.30	2.53	1.24	2.04	1.10
Parental education	2.28	1.15	2.68	1.24	2.91	1.28	2.66	1.27	2.56	1.22
Categorical										
Low	59.76		49.16		42.06		48.85		51.71	
Medium	26.08		29.45		28.45		28.35		28.49	
High	14.16		21.40		29.48		22.80		19.80	
$\Delta_{\text{Edu}}$	-0.13	1.27	-0.32	1.24	-2.09	1.28	-0.64	1.51	-0.61	1.41
Categorical										
Equal	34.58		30.11		17.11		28.10		29.41	
Down	25.65		22.37		0.00		19.13		18.38	
Up	39.77		47.52		82.89		52.78		52.21	
Make parents proud	2.26	0.79	2.08	0.87	1.91	0.89	2.09	0.86	2.11	0.86
Media consumption	2.70	1.14	2.88	1.09	3.15	0.96	2.87	1.09	2.89	1.09
Language skills	3.34	0.97	3.61	0.77	3.76	0.61	3.55	0.81	3.57	0.83
Native neighborhood share	2.63	1.12	2.71	1.11	2.82	1.10	2.73	1.12	2.68	1.10
Unconcealed religiosity	1.36	0.74	1.35	0.77	1.31	0.78	1.31	0.78	1.38	0.75
Age	35.98	11.45	34.61	9.99	35.40	10.07	36.16	11.09	34.20	9.74
Ethnic identity	3.08	1.00	2.95	1.03	2.91	1.01	2.94	1.05	3.02	0.99
Perceived discrimination	35.56		39.72		39.51		41.00		35.92	
2. Generation	46.49		56.56		59.80		46.58		61.68	
Employed	57.37		70.29		76.97		78.81		56.93	
Women	54.32		50.68		44.04					
Country of origin										
Germany	14.32		26.95		25.25		25.24		20.48	
Belgium	28.92		10.14		4.65		13.19		16.08	
Switzerland	22.70		6.19		9.29		12.13		11.36	
France	10.27		14.40		16.16		11.97		15.04	
United Kingdom	7.57		27.27		26.67		22.39		20.16	
Netherlands	16.22		15.04		17.98		15.07		16.88	
Respondents' education							28.85	10.49	27.85	10.38
Respondents' education (without sub-levels)							3.10	1.28	2.93	1.23
Categorical										
Low							23.94		26.08	
Medium							53.50		56.48	
High							22.56		17.44	

Source: EURISLAM survey, author's own estimates.

Table H.3: Descriptive Sample Statistics for the Overall IAB-SOEP Migration Sample

	Mean / %	SD	Min	Max
Ethnic discrimination at ...				
Housing market	0.48	0.73	0	2
Job market	0.62	0.76	0	2
Public administration	0.64	0.75	0	2
Police	0.27	0.59	0	2
School	0.66	0.74	0	2
Everyday life	0.51	0.63	0	2
Work	0.40	0.62	0	2
Respondents' education	3.24	1.47	1	6
Categorical				
Low	31.41			
Medium	35.82			
High	26.76			
Parental education (gendered)	1.86	0.60	1	3
Parental education	1.99	0.59	1	3
Categorical				
Low	18.00			
Medium	64.75			
High	17.25			
$\Delta_{\text{Edu}}$	0.09	0.75	-2	2
Categorical				
Equal	63.93			
Down	28.17			
Up	19.64			
Parental monitoring	1.74	0.94	0	3
Language skills	-0.00	1.00	-0.78	4.08
Native colleague share	3.61	1.36	1	6
Age	33.18	10.41	17	74
Ethnic identity	2.40	1.18	0	4
Time since school	15.28	11.25	0	60
Muslim	29.04			
EURISLAM sample	30.23			
Final grade				
Overall factor score	0.00	1.00	-3.68	2.23
German	3.36	0.91	1	5
Math	3.37	1.02	0	5
First foreign language	3.53	1.03	0	5
2. Generation	26.33			
Employed	88.91			
Women	52.75			
Country of origin				
Turkey	24.30			
Ex-Yugoslavia	11.52			
Southern Europe	11.35			
Eastern Europe	36.49			
Grand Middle East	8.81			
Other	7.54			

Table H.4: Descriptive Sample Statistics for the IAB-SOEP Migration Sample by Education and Gender

	Education: Low		Medium		High		Gender: Men		Women	
	Mean / %	SD	Mean / %	SD	Mean / %	SD	Mean / %	SD	Mean / %	SD
Ethnic discrimination at ...										
Housing market	0.49	0.72	0.47	0.73	0.53	0.74	0.48	0.72	0.49	0.73
Job market	0.68	0.78	0.60	0.74	0.65	0.79	0.65	0.78	0.60	0.75
Public administration	0.65	0.76	0.61	0.74	0.74	0.74	0.64	0.76	0.64	0.74
Police	0.32	0.65	0.25	0.56	0.26	0.56	0.41	0.68	0.15	0.46
School	0.64	0.75	0.69	0.74	0.55	0.72	0.69	0.74	0.63	0.74
Everyday life	0.54	0.65	0.50	0.62	0.50	0.63	0.50	0.62	0.52	0.64
Work	0.42	0.62	0.38	0.61	0.42	0.66	0.42	0.64	0.37	0.61
Parental education (gendered)	1.62	0.56	1.88	0.54	2.17	0.62	1.92	0.61	1.81	0.59
Parental education	1.74	0.55	2.02	0.54	2.28	0.60	1.98	0.60	2.00	0.59
Categorical										
Low	31.58		13.56	34.28	7.89	27.04	18.69	39.03	17.41	37.96
Medium	63.16		71.03	45.41	55.79	49.79	64.25	47.98	65.18	47.69
High	5.26		15.40	36.14	36.32	48.22	17.06	37.66	17.41	37.96
$\Delta_{\text{Edu}}$	0.74	0.55	0.02	0.54	-0.66	0.61	0.09	0.79	0.08	0.71
Equal	50.94		76.54		41.58		63.80		64.04	
Down	68.42		15.40		1.05		29.13		27.35	
Up	0.00		13.56		61.05		19.90		19.42	
Parental monitoring	1.52	0.99	1.80	0.90	1.86	0.93	1.76	0.92	1.73	0.96
Language skills	0.24	1.09	-0.03	0.97	-0.23	0.83	-0.04	0.97	0.03	1.03
Native colleague share	3.32	1.33	3.70	1.32	3.94	1.41	3.62	1.37	3.60	1.34
Age	32.29	10.97	33.19	9.50	37.89	8.48	33.32	10.67	33.05	10.17
Ethnic identity	2.43	1.22	2.35	1.19	2.54	1.03	2.41	1.18	2.39	1.19
Time since school	15.54	12.01	15.07	10.41	19.67	9.01	15.38	11.66	15.19	10.88
Muslim	38.81		27.00		16.34		30.29		27.93	
EURISLAM sample	40.43		28.12		18.32		31.18		29.37	
Final grade										
Overall factor score	-0.33	0.97	0.02	0.92	0.61	0.94	-0.14	0.91	0.13	1.07
German	3.14	0.88	3.36	0.88	3.80	0.89	3.15	0.85	3.55	0.92
Math	3.17	0.99	3.37	0.96	3.80	1.03	3.44	0.97	3.30	1.05
First foreign language	3.18	1.08	3.55	0.98	4.08	0.79	3.36	0.99	3.69	1.03
2. Generation	27.76		23.84		31.68		26.88		25.84	
Employed	81.13		91.62		93.07		88.89		88.92	
Women	52.02		53.07		53.96					
Country of origin										
Turkey	35.31		20.67		14.36		25.63		23.11	
Ex-Yugoslavia	11.05		12.85		9.41		11.83		11.24	
Southern Europe	11.59		9.87		17.82		12.72		10.11	
Eastern Europe	25.34		43.02		40.10		32.62		39.97	
Grand Middle East	9.70		8.01		7.43		10.39		7.38	
Other	7.01		5.59		10.89		6.81		8.19	
Respondents' education							3.20		3.27	
Categorical										
Low							31.90		30.98	
Medium							36.38		35.31	
High							25.45		27.93	

Table H.5: Descriptive Sample Statistics on Social Mobility and Perceived Discrimination

Parental education	Respondents' own education			Total
	<i>Low</i>	<i>Medium</i>	<i>High</i>	
<i>Low</i>				
N	102	74	36	212 (26.1%)
Outflow (row)	48.1%	34.9%	17.0%	
Inflow (column)	42.5%	24.3%	13.43%	
Cell	12.6%	9.1%	4.4%	
Perc. discrimination	0.33	0.68	0.5	0.47
<i>Medium</i>				
N	129	207	170	506 (62.2%)
Outflow (row)	25.5%	41.0%	33.6%	
Inflow (column)	53.8%	67.9%	63.4%	
Cell	15.9%	25.5%	20.9%	
Perc. discrimination	0.64	0.71	0.54	0.60
<i>High</i>				
N	9	24	62	95 (11.7%)
Outflow (row)	9.5%	25.3%	65.3%	
Inflow (column)	3.8%	7.9%	23.1%	
Cell	1.1%	3.0%	7.6%	
Perc. discrimination	1.22	0.71	0.55	0.68
Total				
N	240	305	268	813
%	29.5%	37.5%	32.9%	100.0%
Perc. discrimination	0.53	0.70	0.53	0.60

Source: IAB-SOEP Migration sample, author's own estimates.

## **Supplement I: Explicit Downward Educational Mobility, Sensitivity Analyses**

This online Supplement presents additional results on the sensitivity of the results regarding explicit downward educational mobility. The measurement of explicit downward educational mobility as the difference between parental and respondents' own education has the disadvantage that it is a direct linear function of the two involved variables. As such all three could not be used in the same model because of perfect collinearity (i.e., full rank). Yet, considering respondents' own and parental education is arguably important, because the integration paradox literature, which was reviewed in the theory section, has repeatedly shown how better-educated persons of immigrant origin report experiences of discrimination more frequently – and they tend to be the upwardly mobile. For this reason, the main results reported in the article control for respondents' own and parental education by using diagonal reference models (Sobel 1981, 1985).

For those who are not familiar with diagonal reference models, Table I.1 shows common logistic regression estimates that are not adjusted for respondents' own and parental education. The findings are largely similar to the results reported in Table 3 in the main article, and thus further suggest that the interaction between respondents' own and parental education is simply a more consistent predictor of perceived discrimination than any (continuous or categorical) measure of explicit downward mobility.

Table I.2 shows results for the IAB-SOEP sample. Models 2a, 3a, 4a and 5 replicate Table 3 of the main article. The interaction between parental education and respondents' own education again turns out as a better and more systematic predictor of perceived discrimination than their difference  $\Delta_{\text{Edu}}$  or a categorical variable that indicates downward, upward or no educational mobility. Models 2b, 3b and 4b replicate the results reported in Table I.1, meaning these models do not control for respondents' own and parental education. The results based on the IAB-SOEP sample also provide no support for sub-hypothesis 2a.

Table I.1: Intergenerational Social Mobility and Perceived Discrimination, No Controls for Parental and Own Education

	Model 2 of Table 3		Model 3 of Table 3		Model 4 of Table 3	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
$\Delta_{\text{Edu}}$	0.069	1.369	0.152	1.241		
Spline			-0.094	-0.584		
$^*\Delta_{\text{Edu}}$			-0.183	-1.111		
Educational mobility						
Down					0.092	0.699
Up					-0.095	-0.913
Controls	✓		✓		✓	
McFadden's Pseudo-R2	0.062		0.063		0.063	

*Note:* Logistic regression results. Results are controlled for: immigrant generation, employment status, media consumption, language skills, share of native residents in the neighborhood, unconcealed religiosity, country of residence and origin differences, gender, and age.  $n = 2,478$ ;  $^+ p < 0.10$ ,  $^* p < 0.05$ ,  $^{**} p < 0.01$ ,  $^{***} p < 0.001$ .

*Source:* EURISLAM survey, author's own estimates.

Table I.2: Intergenerational Social Mobility and Perceived Ethnic Discrimination at School, Difference between parental and respondent's own education

	Model		Model		Model		Model 5
	2a	2b	3a	3b	4a	4b	
Respondents' education							-0.162 (-1.519)
Parental education							0.117 (1.158)
*Respondents' education							-0.0667* (-1.855)
$\Delta_{\text{Edu}}$	0.0645 (0.337)	0.0589 (1.634)	0.342 (1.247)	0.361 (1.478)			0.168 (0.628)
Spline			0.248 (0.655)	0.354 (1.034)			0.319 (0.922)
* $\Delta_{\text{Edu}}$			-0.390 (-1.381)	-0.369 (-1.467)			-0.294 (-1.106)
Educational mobility							
Down					0.0249 (0.0843)	0.144* (1.740)	
Up					0.212 (0.771)	0.0129 (0.150)	
Controls	✓	✓	✓	✓	✓	✓	✓
$\omega$ : weight of parental education	-1.493 (-0.470)		-0.395 (-0.536)		-2.0207 (-0.635)		
Diagonal education intercepts							
$\mu_{11}$ : low	0.125 (0.382)		-0.313 (-0.629)		0.0568 (0.163)		
$\mu_{22}$ : medium	0.180 (0.537)		-0.162 (-0.746)		0.0517 (0.151)		
$\mu_{33}$ : high	0.0616 (0.153)		-0.414 (-0.746)		-0.109 (-0.259)		
R2	0.097	0.123	0.102	0.127	0.100	0.124	0.133

*Note:* Model 2a, 3a and 4a are linear diagonal reference models with robust standard errors with  $n = 512$ . Models 2b, 3b, 4b and 5 are linear full information maximum likelihood (FIML) estimates with robust standard errors with  $n = 1,181$ . Results are controlled for: age in years, gender, immigrant generation, country of origin categories, employment status, language skills, and the (former) classroom share of natives.  $t$  statistics in parentheses, \*  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

*Source:* IAB-SOEP Migration sample, author's own estimates.



## Supplement J: Mediation Analysis

The integration paradox literature suggests that language skills, media consumption and the share of natives in the neighborhood drive the higher levels of perceived discrimination among the better educated and among the second generation. The main article claims that based on the EURISLAM data, there is little support for these ideas. However, Table 2 of the main article presents only direct “effects”. Given the largely insignificant associations between perceived discrimination and language skills, media consumption and the native neighborhood share, this conclusion is probably correct. This supplement discusses the results of a mediation analysis to properly test these claims.

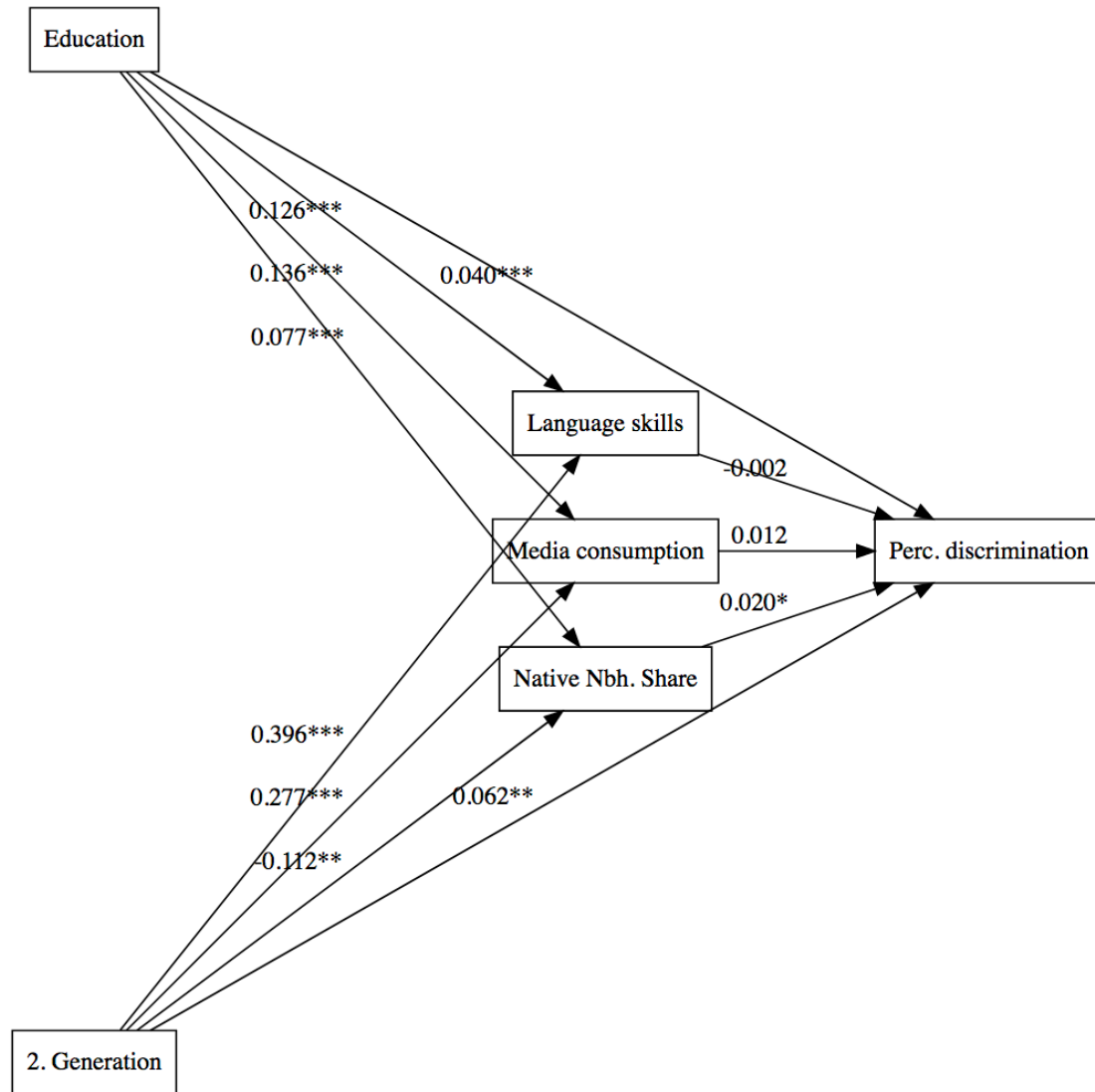
Mediation analysis based on non-linear models is not straight forward (Breen, Karlson, and Holm 2013), particularly if one intends to test several indirect effects simultaneously. For this reason, I estimate a linear probability path model using R’s lavaan package (Roseel 2012). I use full maximum likelihood estimation, because it seems the most direct way to deal with missing values. To deal with the heteroskedasticity resulting from predicting a binary outcome, I use bootstrapped standard errors based on 10,000 resamples. In all other respects the model imitates Model 1 of Table 1 in the main article and contains the same control variables.

Figure J.1 displays results for the central part of the model. It neglects employment status, because it is not a continuous predictor. But the results are controlled for this variable. In line with the literature on immigrant integration, we see that education and second-generation status systematically predict better language skills, media consumption, and living in a neighborhood with higher shares of natives. The one exception is that second generation respondents seem to be significantly less likely than 1.5<sup>th</sup> generation respondents to live in neighborhoods with larger shares of natives. However, just as in Table 1’s multiply imputed logit model, better language skills and media consumption do not predict perceived discrimination. Only the native neighborhood share shows a significant positive association to perceived discrimination. Education and second-generation status remain to predict perceived discrimination directly.

So far, these results merely replicate Model 1 of Table 1 of the main article. Exploiting the capacities of path analysis, however, I can now also report indirect coefficients. The indirect “effects” of education on perceived discrimination running via language skills ( $\beta = -0.000$ ,  $p = 0.871$ ), media consumption ( $\beta = 0.002$ ,  $p = 0.355$ ), and the native neighborhood share ( $\beta = 0.001$ ,  $p = 0.100$ ) are all insignificant (although the indirect effect via the native neighborhood share just misses the threshold for marginal significance). Even combined, the three indirect effects do not reach the verge of statistical significance ( $\beta = 0.003$ ,  $p = 0.272$ ). The same holds for second generation status. There are no significant indirect “effects” running via language skills ( $\beta = -0.001$ ,  $p = 0.871$ ), media consumption ( $\beta = 0.003$ ,  $p = 0.353$ ), or the native neighborhood share ( $\beta = -0.002$ ,  $p = 0.131$ ). Unsurprisingly, the combination of these indirect paths is not significant ( $\beta = 0.000$ ,  $p = 0.969$ ). In conclusion, a proper mediation analysis supports

the conclusions of the main article: education and generation status matter, but not via their paths through language skills, media consumption and neighborhood selection it seems.

Figure J.1: Path diagram of standardized direct and indirect effects of education and second-generation status on perceived discrimination



*Note:* Results are based on a FIML linear probability path model with bootstrapped standard errors and 10,000 bootstrap replications. Apart from the relations shown, the model controls for: age, gender, unconcealed religiosity, employment status, country of residence and country of origin. Model RMSEA: 0.124, and CFI: 0.340.  $n = 2,391$ ,  $^+ p < 0.10$ ,  $^* p < 0.05$ ,  $^{**} p < 0.01$ ,  $^{***} p < 0.001$ .

*Source:* EURISLAM survey, author's own estimates.

## Supplement K: Respondents Who Are at Least 25 Years Old

One might be concerned that excluding respondents who are currently enrolled in education is not enough to ensure that all respondents have completed educational attainment. This seems important, however, because otherwise respondents could still attempt to realize their mobility aspirations. As a further robustness test, this online Supplement therefore presents results that exclude all respondents who are younger than 25. Table K.1 shows that both the EURISLAM and the IAB-SOEP results are robust to this additional sample restriction.

Table K.1: Intergenerational Social Mobility and Perceived Ethnic Discrimination at School for Respondents Who Are at Least 25 Years Old

	EURISLAM		IAB-SOEP	
	$\beta$	$t$	$\beta$	$t$
Respondents' education	0.154 <sup>*</sup>	2.509	-0.0697 <sup>+</sup>	-1.864
Parental education	0.186 <sup>**</sup>	3.131	0.0588	1.364
*Respondents' education	-0.111 <sup>*</sup>	-1.967	-0.0828 <sup>**</sup>	-2.733
Observations	2,048		905	
McFadden's Pseudo- $R^2$	0.266			
$R^2$			0.126	

*Note:* Logistic regression and linear full information maximum likelihood (FIML) estimates with robust standard errors. Results are controlled for: (EURISLAM) immigrant generation, employment status, media consumption, language skills, share of native residents in the neighborhood, unconcealed religiosity, country of residence and origin differences, gender, and age, or (IAB-SOEP) age in years, gender, immigrant generation, country of origin categories, employment status, language skills, and the (former) classroom share of natives. <sup>+</sup>  $p < 0.10$ , <sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$ .

*Source:* EURISLAM survey and IAB-SOEP Migration Sample, author's own estimates.

## Supplement L: Results for ISCED Without Sub-Levels

It is not obvious whether the ISCED scale that distinguishes all sub-levels (e.g., 3A, 3B, etc.) is a better (linear) predictor than the ISCED scale that simply distinguishes between the important educational levels 0 to 5. The numeric metric is less obvious for the detailed scale, for instance. The results reported in the main article use the detailed ISCED scale, so as to use as much (potentially informative) variation as possible. This online supplement provides additional analyses showing that the main results of the article are robust to using the less detailed ISCED scale. Table L.1 reproduces Model 2 of Table 2, Model 1 of Table 3, and Model 5 of Table 3 of the main article.

Table L.1: Intergenerational Social Mobility and Perceived Ethnic Discrimination, Results Based on ISCED Without Sub-Levels

	Model 2 of Table 2		Model 1 of Table 3		Model 5 of Table 3	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
Respondents' education	0.114*	2.317	0.114*	2.306	0.466**	2.830
Parental education	0.146**	2.863	0.158**	3.082	-0.276	-1.244
*respondents' education			-0.101*	-2.178	-0.117 <sup>+</sup>	-1.900
$\Delta_{\text{Edu}}$					0.483	1.593
Spline					0.141	0.771
* $\Delta_{\text{Edu}}$					0.164	0.730
McFadden's Pseudo-R <sup>2</sup>	0.067		0.069		0.072	

*Note:* Logistic regression results, controlled for: immigrant generation, employment status, media consumption, language skills, share of native residents in the neighborhood, unconcealed religiosity, country of residence and origin differences, gender, and age.  $n = 2,478$ ; <sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

*Source:* EURISLAM survey, author's own estimates.

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